Saskatchewan
Parks and
Renewable
Resources

"Atlas of Saskatchewan Fish"

Fisheries Technical Report 83-2

ATLAS OF SASKATCHEWAN FISH

PRESENTED TO
FISHERIES BRANCH
DEPARTMENT OF PARKS AND RENEWABLE RESOURCES
REGINA, SASKATCHEWAN

BY

F.M. ATTON
412 LESLIE AVE., SASKATOON

AND

J.J. MERKOWSKY
ECOLOGIST, SASKATCHEWAN FISHERIES LABORATORY

TECHNICAL REPORT 83-2
OCTOBER 1983

Atton, F.M. and J.J. Merkowsky. 1983. Atlas of Saskatchewan fish. Saskatchewan Dept. of Parks and Renewable Resources, Regina, Sask. Fish Tech. Rep. 83-2. 281 pp.

Note to Readers:
If you are aware of fish distribution records which meet the criteria for acceptance in this atlas (see section 3.1, Materials), the authors would appreciate such information.

EXECUTIVE SUMMARY

The importance of fish in Saskatchewan has evolved from an essential subsistence resource for the explorer and trader through a substantial commercial resource for northern residents to a key attraction for the present-day tourist and recreation industry. The distribution of the fish fauna has been documented in journals from as early as 1820, as well as reports of scientific studies from 1892 to the present. The great majority of records have been accumulated since about 1940. This atlas presents the available information up to 1983.

Maps are presented for 58 species of native Saskatchewan fish. The records presented are those which, in the opinion of the authors, meet reasonable criteria of reliability. There are also maps and records for 10 forms of fish that have been introduced or are of accidental occurrence in Saskatchewan.

TABLE OF CONTENTS

Page

Executive Summary *i.*

Contents *iii.*

List of Distribution Maps *iv.*

1. INTRODUCTION 1
   - 1.1 BACKGROUND 1
   - 1.2 STUDY AREA 4
   - 1.3 OBJECTIVES 4
   - 1.4 ACKNOWLEDGEMENTS 5

2. THE FISH SPECIES 6
   - 2.1 NATIVE SPECIES 7
   - 2.2 INTRODUCED AND ACCIDENTAL SPECIES 11

3. MATERIALS AND METHODS 12
   - 3.1 MATERIALS 12
   - 3.2 METHODS 13

4. FISH DISTRIBUTION 18
   - 4.1 RECORDS 18
   - 4.2 MAPS 190

5. REFERENCES 263

APPENDIX 279

LIST OF DISTRIBUTION MAPS

Page

Native species

Map 1 Chestnut lamprey 193
Map 2 Lake sturgeon 194
Map 3 Lake whitefish 195
Map 4 Lake cisco 196
Map 5 Blackfin cisco 197
Map 6 Shortjaw cisco 198
Map 7 Cisco 199
Map 8 Round whitefish 200
Map 9 Lake trout 201
Map 10 Arctic grayling 202
Map 11 Goldeye 203
Map 12 Mooneye 204
Map 13 Central mudminnow 205
Map 14 Northern pike 206
Map 15 Lake chub 207
Map 16 Flathead chub 208
Map 17 Fathead minnow 209
Map 18 Pearl dace 210
Map 19 Creek chub 211
Map 20 Finescale dace 212
Map 21 Northern redbelly dace 213
Map 22 Longnose dace 214
Map 23 Blacknose dace 215
Map 24 Brassy minnow 216

Map 25 Western silvery minnow 217
May 26 Golden shiner 218
Map 27 Emerald shiner 219
Map 28 River shiner 220
Map 29 Common shiner 221
Map 30 Blacknose shiner 222
Map 31 Spottail shiner 223
Map 32 Sand shiner 224
Map 33 Longnose sucker 225
Map 34 White sucker 226
Map 35 Mountain sucker 227
Map 36 Bigmouth buffalo 228
Map 37 Quillback 229
Map 38 Silver redhorse 230
Map 39 Shorthead redhorse 231
Map 40 Black bullhead 232
Map 41 Brown bullhead 233
Map 42 Channel catfish 234
Map 43 Stonecat 235
Map 44 Tadpole madtom 236
Map 45 Trout-perch 237
Map 46 Burbot 238
Map 47 Brook stickleback 239
Map 48 Ninespine stickleback 240
Map 49 Rock bass 241

Map 50 Yellow perch 242
Map 51 Walleye 243
Map 52 Sauger 244
Map 53 Logperch 245
Map 54 Blackside darter 246
Map 55 Johnny darter 247
Map 56 Iowa darter 248
Map 57 Slimy sculpin 249
Map 58 Spoonhead sculpin 250
Map 59 Deepwater sculpin 251

Introduced and other species

Map 60 American eel 252
Map 61 Rainbow trout 253
Map 62 Brown trout 254
Map 63 Brook trout 255
Map 64 Splake 256
Map 65 Kokanee 257
Map 66 Carp 258
Map 67 Smallmouth bass 259
Map 68 Largemouth bass 260
Map 69 Freshwater drum 261

1. INTRODUCTION

Considerable records exist of the occurrence of Saskatchewan fish. However, these records are poorly known, since they have not been compiled nor made available in one place. The only reference available for the whole province is Freshwater Fishes of Canada (Scott and Crossman 1973)--excellent, but a general treatise to which much distribution data can now be added. This report presents the pertinent records and maps that show the distribution of species of fish in Saskatchewan in detail.

1.1 BACKGROUND

The occurrence and distribution of fish in Saskatchewan was first recorded by the explorer-traders of the fur trade era, primarily because fish was often the essential food item of daily survival for men and dogs. The species mentioned in such journals were the larger ones--suckers, whitefish, northern pike, walleye and lake trout. Sites for trading posts and wintering quarters were frequently chosen because of the availability of good supplies of these food fish (Smythe 1968). This was the pattern and contribution of the 18th century to the knowledge of fish in Saskatchewan.

The earliest scientific work began at the opening of the 19th century when Sir John Richardson, as surgeon and naturalist to the expeditions of Franklin, wintered at Cumberland House and visited Carlton House. At the latter location, he obtained the first specimens of the flathead chub in April 1827, which he described as a species new to science (Richardson 1836). A geologist, H.Y. Hind, exploring the Qu'Appelle and Saskatchewan Rivers in 1858, mentions the food fish, but gives little information about their occurrence in these waters (Hind 1860). There are similar scraps of information in accounts written by the rich (sometimes noble) safari buffalo hunters and travellers who were not uncommon in the southern half of Saskatchewan after about 1860 (Cheadle 1931). The best information about fish in this period was given by F.C. Gilchrist, a fishery officer for Canada at Fort Qu'Appelle from 1884 to 1895. He had a genuine interest in fisheries work and reported annually on his observations (Gilchrist 1888).

Modern scientific studies of fish distribution in Saskatchewan began in 1892 with the collecting trip of C.H. Eigenmann and R.S. Eigenmann (1892). In 1903 and 1904, Preble collected fish (Preble 1908) in northern Saskatchewan and in 1907, Halkett (Prince _et al_. 1908) collected in the Qu'Appelle system; many of his specimens are in the National Museum of Canada. Also in the National Museum are specimens collected by Francis Harper in 1914 (Harper and Nichols 1919). In a second expedition in 1920, Harper did more collecting which was reported on by Kendall (1924).

D.S. Rawson began work in Prince Albert National Park in 1928, and many of his collections are in the Royal Ontario Museum (ROM), as well as the University of Saskatchewan Biology Department (USB). J.E. Moore, as a graduate student, collected in 55 lakes in the grasslands and forest regions of the southern half of the province from 1938 to 1942 (Rawson and Moore 1944). The first checklist of Saskatchewan fish was prepared by Rawson as a member of a Royal Commission on the Fisheries of Saskatchewan, 1947 (Rawson 1949). It listed 38 native species and 4 introduced ones.

Two major museums for fish collections have given some attention to Saskatchewan. In 1955, W.B. and M. Scott collected in the Cypress Hills, Qu'Appelle and Souris drainages for the Royal Ontario Museum (ROM). The National Museums of Canada (NMC) did work in 1962, 1969 and 1970 in southern Saskatchewan. Other expeditions collected in the central and northern areas of the province in 1975 and 1978. Also, the Saskatchewan Museum of Natural History (SMNH) has accumulated incidental collections from the Churchill River south, from 1975 to the present, but mainly in southern Saskatchewan.

The Saskatchewan Fisheries Laboratory began work as a government laboratory in 1950, located on the University of Saskatchewan campus at Saskatoon. From 1950 to 1983, there have been 28 biologists who collected and recorded fish from almost every part of the province. Two resource officers, P.H. Edwards and D.E. Snell, must receive special mention because of the continuous and extensive collecting they did for over 30 yr. Many other resource officers and a large number of biological assistants have also contributed to the records, as have various university faculty and students. Since 1970, some records of fish occurrence have come from environmental impact studies done by consultants.

1.2 STUDY AREA

The use of political boundaries defines an artificial study area: it is a common procedure. Each province of Canada has a provincial book dealing with its fishes (except Saskatchewan). These boundaries, however, are not overriding in this report, and we have felt free to use records that contribute to the picture of a species distribution when they are near the borders of Saskatchewan. As will become clear in this report, the real and functional study areas are the several drainage basins that make up the hydrography of the province. Three continental watersheds, Missouri, Hudson Bay and Arctic, are treated as five major and three minor drainage basins. Details of analysis are explained in the methods section.

1.3 OBJECTIVES

This atlas has three objectives:

1. To compile the available records of fish occurrence in Saskatchewan water bodies.
2. To provide a series of maps showing the distribution of fish in Saskatchewan.
3. To use only those records of fish occurrence that meet criteria of reliability.

1.4 ACKNOWLEDGEMENTS

It is almost impossible to recognize the very large number of people who have contributed specimens, data and information and have helped this project in many and diverse ways. This includes well over 100 student assistants of the Saskatchewan Fisheries Laboratory, as well as other students and instructors. The 28 fisheries biologists who have worked at the laboratory since 1950, as well as management biologists at Prince Albert and La Ronge, are all named throughout the species records. Saskatchewan resource officers have aided in field work, as have other persons of whom we have not been aware. We sincerely appreciate the interest and assistance of these colleagues.

The senior author is particularily grateful for the guidance and willing help of D.S. Rawson and W.B. Scott. We also appreciate the ready assistance of E.J. Crossman, Royal Ontario Museum; D.E. McAllister, National Museums of Canada; D. Baron and K. Roney, Saskatchewan Museum of Natural History; U.T. Hammer, R.J.F. Smith and G. Wobeser, University of Saskatchewan; and J. Leach, Kelsey Institute.

Two resource officers, D.E. Snell and P.H. Edwards, have probably collected at more sites than anyone else in Saskatchewan. We owe a debt of gratitude to them for data, as we do to R.P. Johnson, G.E. Couldwell and P.C. Naftel for support of our work in 1983, and J. Fontaine for her patience and skill in typing some very monotonous and boring copy.

The senior author is especially indebted to J.J. Merkowsky for compiling records, drafting, manuscript reading and help in many other ways.

The base map was drafted by the Graphics Group of the Saskatchewan Research Council. W.W. Sawchyn and J.S. Wilson also provided willing consultation.

Financial assistance, work space and facilities were provided by the Saskatchewan Department of Parks and Renewable Resources.

2. THE FISH SPECIES

There are 58 native fish species known in Saskatchewan. There are also seven species and one hybrid that have been introduced intentionally into provincial waters, and two species which we refer to as accidental--these last are the carp and freshwater drum. The total is 68 forms. The native species belong to 17 families. The lists presented here follow Special Publication No. 12 of the American Fisheries Society (Robins et al. 1980) in the scientific and common names used (except the genus, Chrosomus)

2.1 NATIVE SPECIES

Petromyzontidae - Lamprey Family	
Ichthyomyzon castaneus Hubbs and Trautman	Chestnut lamprey
Acipenseridae - Sturgeon Family	
Acipenser fulvescens Rafinesque	Lake sturgeon
Coregonidae - Whitefish family	
Coregonus clupeaformis (Mitchill)	Lake whitefish
Coregonus artedii Lesueur	Lake cisco
Coregonus nigripinnis (Gill)	Blackfin cisco
Coregonus zenithicus (Jordan and Evermann)	Shortjaw cisco
Prosopium cylindraceum (Pallas)	Round whitefish
Salmonidae - Trout Family	
Salvelinus namaycush (Walbaum)	Lake trout
Thymallidae - Grayling Family	
Thymallus arcticus (Pallas)	Arctic grayling
Hiodontidae - Mooneye Family	
Hiodon alosoides (Rafinesque)	Goldeye
Hiodon tergisus Lesueur	Mooneye

Umbridae - Mudminnow Family

Umbra limi (Kirtland)	Central mudminnow

Esocidae - Pike Family

Esox lucius Linnaeus	Northern pike

Cyprinidae - Minnow Family

Couesius plumbeus (Agassiz)	Lake chub
Hybopsis gracilis (Richardson)	Flathead chub
Pimephales promelas Rafinesque	Fathead minnow
Semotilus margarita (Cope)	Pearl dace
Semotilus atromaculatus (Mitchill)	Creek chub
Chrosomus neogaeus (Cope)	Finescale dace
Chrosomus eos Cope	Northern redbelly dace
Rhinichthys cataractae (Valenciennes)	Longnose dace
Rhinichthys atratulus (Hermann)	Blacknose dace
Hybognathus hankinsoni Hubbs	Brassy minnow
Hybognathus argyritis Girard	Western silvery minnow
Notemigonus crysoleucas (Mitchill)	Golden shiner
Notropis atherinoides Rafinesque	Emerald shiner
Notropis blennius (Girard)	River shiner
Notropis cornutus (Mitchill)	Common shiner
Notropis heterolepis Eigenmann and Eigenmann	Blacknose shiner
Notropis hudsonius (Clinton)	Spottail shiner
Notropis stramineus (Cope)	Sand shiner

Catostomidae - Sucker Family

Catostomus catostomus (Forster)	Longnose sucker
Catostomus commersoni (Lacepede)	White sucker
Catostomus platyrhynchus (Cope)	Mountain sucker
Ictiobus cyprinellus (Valenciennes)	Bigmouth buffalo
Carpiodes cyprinus (Lesueur)	Quillback
Moxostoma anisurum (Rafinesque)	Silver redhorse
Moxostoma macrolepidotum (Lesueur)	Shorthead redhorse

Ictaluridae - Catfish Family

Ictalurus melas (Rafinesque)	Black bullhead
Ictalurus nebulosus (Lesueur)	Brown bullhead
Ictalurus punctatus (Rafinesque)	Channel catfish
Noturus flavus Rafinesque	Stonecat
Noturus gyrinus (Mitchill)	Tadpole madtom

Percopsidae - Trout-perch Family

Percopsis omiscomaycus (Walbaum)	Trout-perch

Gadidae - Cod Family

Lota lota (Linnaeus)	Burbot

Gasterosteidae - Stickleback Family

Culaea inconstans (Kirtland)	Brook stickleback
Pungitius pungitius (Linnaeus)	Ninespine stickleback

Centrarchidae - Sunfish Family

Ambloplites rupestris (Rafinesque)	Rock bass

Percidae - Perch Family

Perca flavescens (Mitchill)	Yellow perch
Stizostedion vitreum (Mitchill)	Walleye
Stizostedion canadense (Smith)	Sauger
Percina caprodes (Rafinesque)	Logperch
Percina maculata (Girard)	Blackside darter
Etheostoma nigrum (Rafinesque)	Johnny darter
Etheostoma exile (Girard)	Iowa darter

Cottidae - Sculpin Family

Cottus cognatus Richardson	Slimy sculpin
Cottus ricei (Nelson)	Spoonhead sculpin
Myoxocephalus quadricornis (Linnaeus)	Deepwater sculpin

2.2 INTRODUCED (EXOTIC) AND ACCIDENTAL SPECIES

Anguillidae - Freshwater eel Family	
Anguilla rostrata (Leseur)	American eel
Salmonidae - Trout Family	
Salmo gairdneri (Jordan)	Rainbow trout
Salmo trutta Linnaeus	Brown trout
Salvelinus fontinalis (Mitchill)	Brook trout
S. fontinalis x *S. namaycush*	Splake
Oncorhynchus nerka (Walbaum)	Kokanee
Cyprinidae - Minnow Family	
Cyprinus carpio Linnaeus	Carp
Centrarchidae - Sunfish Family	
Micropterus dolomieui Lacepede	Smallmouth bass
Micropterus salmoides (Lacepede)	Largemouth bass
Sciaenidae - Drum Family	
Aplodinotus grunniens Rafinesque	Freshwater drum

3. MATERIALS AND METHODS

3.1 MATERIALS

The background section (1.1) indicates in a general way the kinds of materials available to establish the species of fish and their distribution in Saskatchewan. We have not attempted an intensive search of the journals of the 18th and 19th centuries, but have been able to examine most pertinent records since 1888. We have used records of 765 individual collections distributed in the eight drainage basins as follows:

Basin	Collections
Missouri	56
Qu'Appelle	132
Winnipegosis	29
Saskatchewan	184
Churchill	230
Kazan	1
Arctic	86
Internal	47

The source materials vary widely in perceived reliability. The records we have accepted for native species meet one or more of the following criteria:

a) Specimens are in a museum.

b) There is a record in the published scientific literature or in a technical report of the Saskatchewan Fisheries Laboratory.

c) The species has been identified in a collection which the senior author has examined or which has been reported personally by a competent observer.

A number of possible sources do not meet these requirements and have not been used. Rejected records include incidental mention in administrative files, most routine collectors reports, commercial records, and miscellaneous mentions of fish which cannot be corroborated in a satisfactory way. Some records were rejected because they lack the location or water body in which the species was found.

The records for introduced species incorporate data that meet the criteria above, and other data that do not meet those criteria. The kind of record is indicated where possible, e.g. a list of waters reported to be stocked with the species.

3.2 METHODS

All available records have been examined. Each possible record was entered on an EZE-SORT punch card to facilitate sorting by species and location. The details of coding and manipulation of this system of handling information are explained in Appendix 1. To avoid massive duplication of cards, material such as commercial catch records was used selectively.

The card entry shows the water body, the species reported and the associated date. There may be one or several cards for a water body corresponding to different dates recorded. The province has been divided into eight drainage basins and 45 drainage systems. The water body is assigned to the appropriate drainage basin and system which may be determined in Fig. 1 and Table 1. The appropriate code numbers are entered (indicating basin and system) on the card. Similarly, the reported species are marked by circling the code number associated with each. Also entered on each card is the reference or other source of the record. Latitude and longitude are entered if the water body is not shown in the Gazetteer of Canada - Saskatchewan (Anonymous 1969). Finally, the code numbers for drainage and species are punched on the margin of the card. An example of a completed card is shown in Fig. 2.

The available information for a species and drainage location (water body) can be quickly selected from any number of record cards. It is unnecessary to file the cards in any specified order. The materials to form a species record can be selected at this point in time on the basis of the criteria outlined above. Each individual species record which has been used in this report is marked with a red tick on the card: these cards form the data bank of information used to create the distribution record for each species.

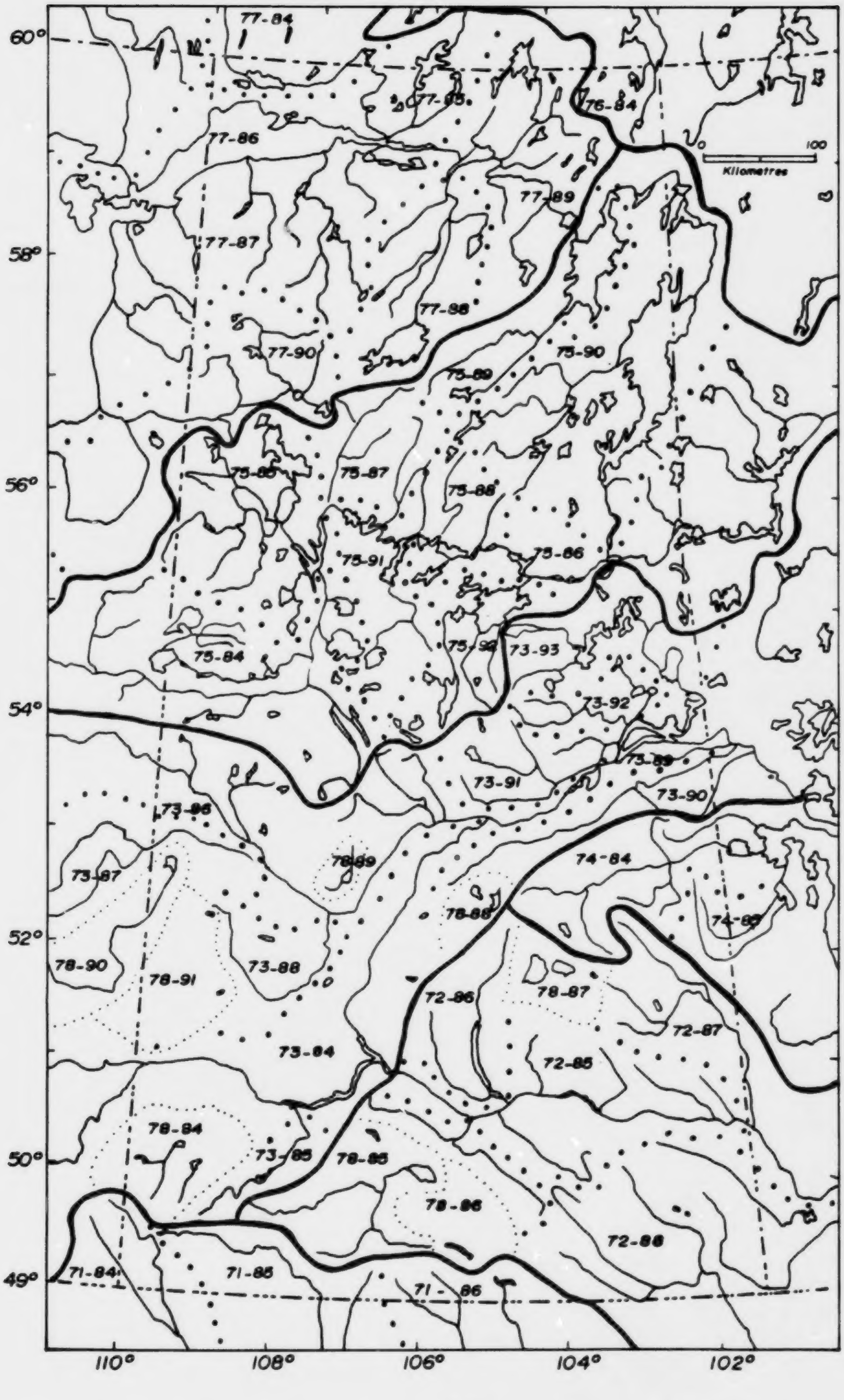
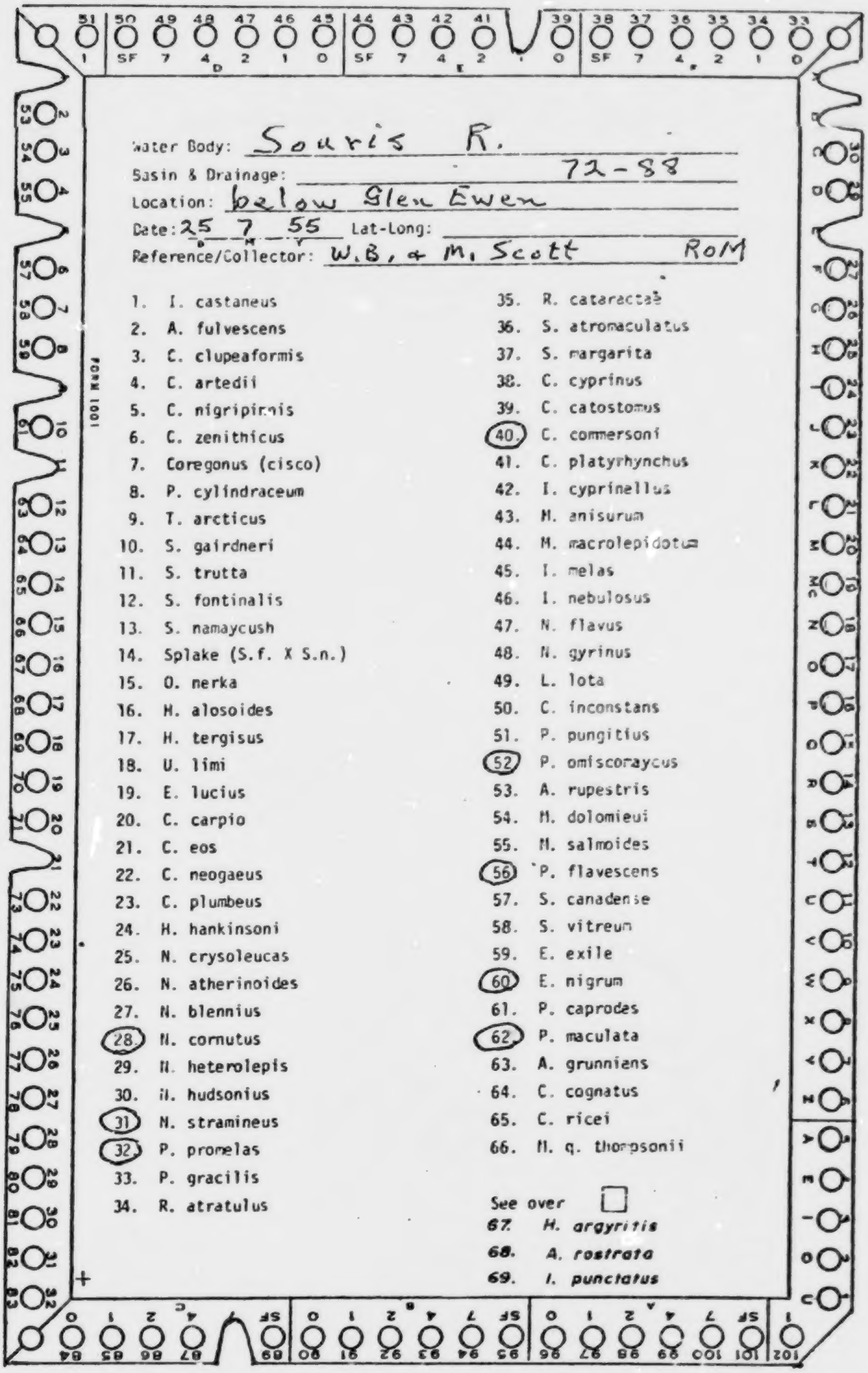

60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres
77-84
77-85
76-84
77-86
77-89
77-87
77-88
77-90
75-90
75-89
75-85
75-87
75-88
75-91
75-86
75-84
75-92
73-93
73-92
73-89
73-91
73-90
73-86
78-89
74-84
73-87
78-88
74-85
52°
78-90
78-91
73-88
72-86
78-87
72-87
73-84
72-85
78-84
73-85
78-85
78-86
72-88
71-84
71-85
71-86

Fig. I Drainage basins (▬) and systems (•••) for plotting fish distribution in Saskatchewan. The first code number indicates the basin, the second number the system within a basin. Drainage 78 indicates internal systems. (·····)

Table 1. Saskatchewan drainage systems.[1]

Basin	System
71. Missouri	84. Milk R.
	85. Frenchman R.
	86. Poplar - Big Muddy
72. Qu'Appelle	84. Moose Jaw R.
	85. Qu'Appelle R.
	86. Last Mountain
	87. Assiniboine
	88. Souris
73. Saskatchewan	84. S. Saskatchewan R.
	85. Swift Current Cr.
	86. N. Saskatchewan R.
	87. Battle R.
	88. Eagle Cr.
	89. Sask. R. - Cumberland Delta
	90. Carrot R.
	91. Torch R.
	92. Mossy - Grassberry R.
	93. Wapawekka - Amisk
74. Winnipegosis	84. Red Deer - Overflowing R.
	85. Swan - Woody R.
75. Churchill	84. Beaver - Waterhen R.
	85. Peter Pond - Ile-X
	86. Churchill R.
	87. Mudjatik - Haultain R.
	88. Foster - Paul R.
	89. Wollaston
	90. Cochrane - Reindeer
	91. Smoothstone - Pinehouse
	92. Montreal - La Ronge
76. Kazan	84. Kazan
77. Arctic	84. Tazin R.
	85. N. Athabasca - Scott L.
	86. L. Athabasca
	87. S. Athabasca - William - McFarlane R.
	88. Cree L. - Cree R.
	89. Fond du Lac - Selwyn - Black L.
	90. Clearwater R.
78. Internal	84. Maple - Antelope
	85. Wood R.
	86. Willowbunch
	87. Quill L.
	88. Basin - Lenore L.
	89. Redberry L.
	90. Manito - Eyehill
	91. Cabri - Muddy L.

[1] *Refer to the appendix for an explanation of the drainage coding.*



Water Body: Souris R.

Basin & Drainage: 72-88

Location: below Glen Ewen

Date: 25 7 55 Lat-Long:

Reference/Collector: W. B. & M. Scott ROM

FORM 1001

1. I. castaneus
2. A. fulvescens
3. C. clupeaformis
4. C. artedii
5. C. nigripinnis
6. C. zenithicus
7. Coregonus (cisco)
8. P. cylindraceum
9. T. arcticus
10. S. gairdneri
11. S. trutta
12. S. fontinalis
13. S. namaycush
14. Splake (S.f. X S.n.)
15. O. nerka
16. H. alosoides
17. H. tergisus
18. U. limi
19. E. lucius
20. C. carpio
21. C. eos
22. C. neogaeus
23. C. plumbeus
24. H. hankinsoni
25. N. crysoleucas
26. N. atherinoides
27. N. blennius
[✓ 28.] N. cornutus
29. N. heterolepis
30. N. hudsonius
[✓ 31.] N. stramineus
[✓ 32.] P. promelas
33. P. gracilis
34. R. atratulus
35. R. cataractae
36. S. atromaculatus
37. S. margarita
38. C. cyprinus
39. C. catostomus
[✓ 40.] C. commersoni
41. C. platyrhynchus
42. I. cyprinellus
43. M. anisurum
44. M. macrolepidotum
45. I. melas
46. I. nebulosus
47. N. flavus
48. N. gyrinus
49. L. lota
50. C. inconstans
51. P. pungitius
[✓ 52.] P. omiscomaycus
53. A. rupestris
54. M. dolomieui
55. M. salmoides
[✓ 56.] P. flavescens
57. S. canadense
58. S. vitreum
59. E. exile
[✓ 60.] E. nigrum
61. P. caprodes
[✓ 62.] P. maculata
63. A. grunniens
64. C. cognatus
65. C. ricei
66. M. q. thompsonii

See over ☐

67. H. argyritis
68. A. rostrata
69. I. punctatus

Fig. 2 A completed punch card.

4. FISH DISTRIBUTION

4.1 RECORDS

Each record which has been located and accepted shows the drainage basin, water body and the source of the information. If this source is a publication or a technical report, it will be found in the literature cited. Museum holdings are indicated by the acronym for the institution. Collectors records which have been accepted are identified by the abbreviation "coll." The following examples are selected from the distribution record for arctic grayling and will clarify the usage adopted.

Reindeer L., Rawson, 1950 - literature
Wollaston L., D.S. Rawson, ROM, 1956 - museum
Ithingo L., G.H. Nelson, coll. 1953 - collector

The geographic abbreviations used in the records are those recognized in the Gazetteer of Canada.

B	bay	I	island	Res	reservoir
Br	brook	L	lake	S	south
Cr	creek	N	north	W	west
E	east	R	river		

Other contractions follow common usage in journals, e.g.

NMC	National Museums of Canada
ROM	Royal Ontario Museum
SMNH	Saskatchewan Museum of Natural History
USB	University of Saskatchewan Biology Department

SPECIES RECORDS

Chestnut lamprey, Ichthyomyzon castaneus
Hubbs and Trautman

Map 1

Qu'Appelle Basin

Whitesand R., P.H. Edwards, coll. 1962

Shell R., R. Puddicombe, coll. 1981 (near Shellmouth, Man.)

Round L., A. Gellert, coll. 1965; Jensen, 1980

Qu'Appelle R., ROM, 1977 (near Tantallon)

Lake sturgeon, Acipenser fulvescens Rafinesque Map 2

Saskatchewan Basin
- N. Saskatchewan R., Gilchrist, 1892
- S. Saskatchewan R., Reed, 1962; J.J. Merkowsky, coll. 1983
- Diefenbaker L., M.E. Swanson, coll. 1975
- Saskatchewan R., Reed, 1962; Royer, 1966; Sawchyn, 1982
- Cumberland L., F.M. Atton, coll. 1954; Reed, 1962
- Candle L., Johnson, 1963; A. Fremont, coll. 1970

Churchill Basin
- Pita L., F.M. Atton and J.P. Cuerrier, coll. 1954

Lake whitefish, Coregonus clupeaformis (Mitchill) Map 3

Qu'Appelle Basin

Last Mountain L., Atton and Murray, 1952; C.C. Lindsey, coll. 1971; Smith, 1976

Pasqua L., W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c

Echo L., Atton and Johnson, 1962; Johnson, 1963c

Lebret L., Atton and Johnson, 1962

Katepwa L., Atton and Johnson, 1962

Crooked L., Doyle, 1961; Atton and Johnson, 1962

Fishing L., Gilchrist, 1888 (possibly Pasqua L.)

Saskatchewan Basin

Diefenbaker L., Smith, 1974a; M.E. Swanson, coll. 1975

Lac Pelletier, USB, 1948

Jackfish L., Rawson, 1949; Atton and Novakowski, 1956; Naftel, 1965; Liaw, 1978

Murray L., Naftel, 1965; Liaw, 1978

Sturgeon L., Mendis, 1956

Turtle L., D.S. Rawson, coll. 1942; Sawchyn, 1967a

Saskatchewan R., Sawchyn, 1980

Cumberland L., ROM, 1928; Reed, 1959

Namew L., Reed, 1959b

Amisk L., Rawson, 1952

Wakaw L., Mendis, 1956

Candle L., Johnson, 1963

Lower Fishing L., Royer, 1964

Upper Fishing L., Royer, 1964

Limestone L., Lane, 1967

Big Sandy L., Lane, 1967

Deschambault L., Johnson, 1967

Lake whitefish . . . .

Granite L., Sawchyn, 1967c
Hanson L., Sawchyn, 1967
Jan L., Johnson, 1967
Little Bear L., Johnson, 1963
Manawan L., Schmidt, 1970
Mirond L., Johnson, 1967
Pelican L., Johnson, 1967
Wapawekka L., Chen, 1975
Wildnest L., Sawchyn, 1967
Wood L., Schmidt, 1970

Churchill Basin
Beaver R., Royer, 1972
Cold L., R.B. Miller, coll. 1955
Cowan L., Liaw, 1978
Delaronde L., Liaw, 1976
Dore L., Ruggles, 1959; Johnson, 1968
Green L., Naftel, 1965
Greig L., Lane, 1967
Hackett L., Liaw, 1976
Kimball L., Lane, 1969
Lac des Iles, Atton and Novakowski, 1956; Lane, 1967
Lac la Plonge, Ruggles, ROM, 1959
Makwa L., D.S. Rawson, coll. 1942
Primrose L., B.L. Christensen, coll. 1978
Waterhen L., Atton and Novakowski, 1956
Canoe L., Ruggles, 1959; Kallemeyn, 1969
Churchill L., Rawson, 1957; Kallemeyn, 1973
Frobisher L., Rawson, 1957

Lake whitefish . . . .

Keeley L., Kallemeyn, 1972a
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Lac la Loche, Kallemeyn, 1972
Peter Pond (Big) L., Rawson, 1957; Kallemeyn, 1973
Peter Pond (Little) L., Rawson, 1957; Kallemeyn, 1973
Turnor L., Kallemeyn, 1973
Utikumak L., Kallemeyn, 1972
Wasekamio L., Kallemeyn, 1973
Bartlett L., Koshinsky, 1968
Besnard L., Chen, 1974
Bielby L., Koshinsky, 1968
Contact L., Koshinsky, 1964
Davis L., Sawchyn and Kardash, 1976
Dickens L., Sawchyn and Kardash, 1976
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Drope L., Rawson, 1960
Haugen L., Koshinsky, 1968
Hebden L., Koshinsky, 1964
Iskwatam L., Sawchyn, 1975
Keg L., Liaw and O'Connor, 1975
McLennan L., Sawchyn and Kardash, 1976; S. Nash, coll. NMC, 1978
Mountain L., Rawson, 1960
Nistowiak L., Rawson, 1960
Otter L., Rawson, 1960
Ourom L., Liaw and O'Connor, 1975
Pechey L., Koshinsky, 1968
Pita L., Sawchyn, 1975
Preview L., Koshinsky, 1968
Shagwenaw L., Fernet, 1975
Trade L., Liaw and O'Connor, 1975

Lake whitefish . . . .

Trout L., Koshinsky, 1971
Uskik L., Liaw and O'Connor, 1975
Wintego L., Sawchyn, 1975
Lower Foster L., Dean, 1980b
McIntosh L., Koshinsky, 1971
Middle Foster L., Dean, 1980b
Upper Foster L., Dean, 1979a
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a
Hourglass L., D. Fernet, coll. 1977
Key L., D. Fernet, coll. 1977
Mallen L., B. Paquin, coll. 1981
Martin L., Sawchyn, 1978
Russell L., Sawchyn, 1978
Torwalt L., B. Paquin, coll. 1981
Umpherville R., F. Hunter and S. Nash, NMC, 1978
Wheeler R., Sawchyn, 1978
Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959; S. Nash, NMC, 1978
Brabant L., Sawchyn and Kardash, 1976
Davin L., Liaw, 1976
Fafard L., Sawchyn, 1975
Reindeer L., Novakowski, 1955; Dean, 1975
Steephill L., Sawchyn, 1975
Wapumon L., Sawchyn, 1975
Wathaman L., Liaw, 1976
Wierzycki L., Sawchyn and Kardash, 1976
Elaine L., Low and Fernet, 1974a
Pinehouse L., Chen, 1973
Bigstone L., Mendis, 1956
East Trout L., Marshall, 1970

Lake whitefish . . . .

Kingsmere L., D.S. Rawson, ROM, 1928 (Little Trout L.)
Lac la Ronge, Rawson and Atton, 1951
Lavallee L., D.S. Rawson, ROM, 1928
Little Deer L., Koshinsky, 1964
MacKay L., Koshinsky, 1964
Montreal L., Mendis, 1956
Nemeiben L., Koshinsky, 1964
Nipekamew L., Marshall, 1970
Waskesiu L., D.S. Rawson, ROM, 1928
Weyakwin L., Low and Fernet, 1974

Arctic Basin
Ena L., Barclay and Whiting, 1981
Beaverlodge L., Barclay, 1983
Fredette L., Barclay, 1983
Fontaine L., Dean, 1978a
Low L., Willard, Sawchyn and Light, 1977
Milliken L., Barclay, 1983
Waterloo L., Willard, Sawchyn and Light, 1977
Athabasca L., Preble, 1908; Kendall, 1924; D.S. Rawson, USB, 1943; Rawson, 1947; Atton, 1971
Cantara L., Barclay and Paquin, 1981
Cluff L., Sawchyn, 1975
East Archibald L., Barclay and Paquin, 1981
McFarlane R., Barclay and Paquin, 1981
Murison L., Dean, 1981
Riou L., Dean, 1978
Royal L., Barclay and Paquin, 1981
Sandy L., Tones, 1979
Cree L., Rawson, 1959; S. Nash, NMC, 1978

Lake whitefish . . . .

Giles L., Johnson, 1971a
Wapata L., Johnson, 1971a
Careen L., Atton, 1954
Broach L., Dean, 1981
Gedak L., Dean, 1981
Harbo L., Dean, 1981
Hodge L., Dean, 1981
Lloyd L., E.L. Dean, coll. 1981
Preston L., E.L. Dean, coll. 1981
Forrest L., E.L. Dean, coll. 1981
Patterson L., E.L. Dean, coll. 1981
Beet L., E.L. Dean, coll. 1981
Black L., Johnson, 1971a
Hannah L., Dean, 1978b
Hatchet L., Johnson, 1971b
Nordbye L., Dean, 1978b
Waterbury L., ...1982

Internal Basins

Basin L., D.E. Snell, coll. 1959
Lenore L., D.S. Rawson, coll. 1942
Redberry L., Rawson, 1949

Lake cisco, *Coregonus artedii* Lesueur Map 4

Qu'Appelle Basin
  Last Mountain L., Rawson, 1942
  Pasqua L., Atton and Johnson, 1962
  Echo L., Atton and Johnson, 1962
  Lebret L., Atton and Johnson, 1962
  Katepwa L., Atton and Johnson, 1962
  Round L., Atton and Johnson, 1962
  Crooked L., Atton and Johnson, 1962

Saskatchewan Basin
  Lac Pelletier, D.S. Rawson, USB, 1948
  Murray L., Naftel, 1965
  Limestone L., Lane, 1967a
  Big Sandy L., Lane, 1967a
  Sarginson L., Lane, 1967a
  Nesootao L., Lane, 1967a
  Gillingham L., Lane, 1967a
  Hamell L., Lane, 1967a
  Pine Island L., H.M.S. Cotter, ROM, 1927

Churchill Basin
  Delaronde L., D.S. Rawson, ROM, 1942
  Makwa L., Rawson, 1942
  Waterhen L., Rawson, 1942
  Green L., Naftel, 1965
  Dore L., Ruggles, 1959a
  Big Peter Pond L., Rawson, 1956
  Little Peter Pond L., Rawson, 1956

Lake cisco . . . .

Churchill L., Rawson, 1956
Frobisher L., Rawson, 1956
Lac Ile-a-la-Crosse, Rawson, 1956
Sulphide L., Koshinsky, 1964b
Contact L., Koshinsky, 1964b
Hebden L., Koshinsky, 1964b
Otter L., Rawson, 1959a
Mountain L., Rawson, 1959a
Nistowiak L., Rawson, 1959a
Drinking L., Rawson, 1959a
Waskesiu L., D.S. Rawson, ROM, 1928; Rawson, 1928; A.H. Kooyman, NMC, 1969; Kooyman, 1970
Little Deer L., Koshinsky, 1964b
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b
Upper Foster L., Dean, 1979a
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a
McClean L., B. Paquin, coll. 1981
Kewen L., B. Paquin, coll. 1981
Torwalt L., B. Paquin, coll. 1981
Wollaston L., Sawchyn, 1973

Arctic Basin

Beaverlodge L., Swanson, 1982
Milliken L., Swanson, 1982
Athabasca L., D.S. Rawson, USB, 1943; D.S. Rawson, ROM, 1943; Atton and Novakowski, 1955; Johnson, 1971c
Cluff L., Sawchyn, 1975b
Murison L., Dean, 1981
Waterbury L., D. Krochak, coll. 1978
Broach L., Dean, 1981

Blackfin cisco, Coregonus nigripinnis (Gill) Map 5

Churchill Basin

Kingsmere L., D.S. Rawson, ROM, 1928
Reindeer L., Novakowski, 1955

Shortjaw cisco, Coregonus zenithicus (Jordan and Evermann) Map 6

Churchill Basin

Reindeer L., D.S. Rawson, ROM, 1942; Novakowski, 1955

Arctic Basin

Athabasca L., F. Harper, NMC, 1914; D.S. Rawson, ROM, 1943; Rawson, 1947; F.M. Atton, coll. 1973

Black L., Johnson, 1970

Giles L., Johnson, 1970

Wapata L., Johnson, 1970

Cisco, "Coregonus artedii" complex Map 7

Qu'Appelle Basin

Fishing L., Gilchrist, 1888 (Pasqua L.)

Echo L., D.S. Rawson, USB, 1933; C.C. Lindsey, coll. 1970

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Last Mountain L., Atton and Murray, 1952; C.C. Lindsey, coll. 1970; Smith, 1976

Buffalo Pound L., Johnson and Koshinsky, 1961

Pasqua L., Johnson, 1963c; C.C. Lindsey, coll. 1970

Saskatchewan Basin

Jackfish L., Atton and Novakowski, 1956; Naftel, 1965; Liaw, 1978

Murray L., Liaw, 1978

Turtle L., Sawchyn, 1967a

Wakaw L., Mendis, 1956

Lost Echo L., Edwards, 1966a

Candle L., Johnson, 1963a

Lower Fishing L., Royer, 1964

Upper Fishing L., Royer, 1964

Cumberland L., Reed, 1959b

Namew L., Reed, 1959b

Amisk L., Rawson, 1952

Little Bear L., Johnson, 1963b

Hanson L., Sawchyn, 1967b

Jan L., Johnson, 1967

Pelican L., Johnson, 1967

Deschambault L., Johnson, 1967

Mirond L., Johnson, 1967

Tulabi L., Lane, 1967

Sahli L., Lowe, 1972

Wildnest L., Sawchyn, 1967b

Cisco . . . .

Winteringham L., Lane, 1967a

Tyrrell L., Lane, 1967a

Granite L., Sawchyn, 1967c

Manawan L., Schmidt, 1970

Wood L., Schmidt, 1970

Lindstrom L., Schmidt, 1970

Wapawekka L., Chen, 1975

Churchill Basin

Pierce L., W.K. Liaw, coll. 1979

Beaver R., Royer, 1972

Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b; C.C. Lindsey, coll. 1971

Lac la Plonge, Ruggles, 1959b

Waterhen L., Atton and Novakowski, 1956b

Flotten L., C.C. Lindsey, coll. 1971

Delaronde L., Liaw, 1976b

Cowan L., Liaw, 1978a

Dore L., Johnson, 1968

Greig L., Lane, 1967b; C.C. Lindsey, coll. 1971

Cold L., R.B. Miller, coll. 1955

Canoe L., Ruggles, 1959b; Kallemeyn, 1969

Churchill L., Rawson, 1957; C.C. Lindsey, coll. 1971; Kallemeyn, 1973a

Big Peter Pond L., Rawson, 1957; C.C. Lindsey, coll. 1971

Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a

Turnor L., Kallemeyn, 1973b

Lac Ile-a-la-Crosse, Rawson, 1957; C.C. Lindsey, coll. 1971; Saylor, 1972

Lac la Loche, Kallemeyn, 1972b

Wasekamio L., Kallemeyn, 1973b

Frobisher L., Rawson, 1957

Cisco . . . .

Keeley L., Kallemeyn, 1972a
Utikumak L., Kallemeyn, 1972a
Shagwenaw L., Fernet, 1975
Pinehouse L., Chen, 1973
Besnard L., Chen, 1974
Bigstone L., Mendis, 1956
Nemeiben L., Koshinsky, 1964a
Lac la Ronge, Rawson and Atton, 1953; C.C. Lindsey, coll. 1971
East Trout L., Marshall, 1970
Nipekamew L., Marshall, 1970
Weyakwin L., Low and Fernet, 1974b
Montreal L., Mendis, 1956; C.C. Lindsey, coll. 1971
Bartlett L., Koshinsky, 1968
Trout L., Koshinsky, 1971
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Drope Lake, Rawson, 1960
Nistowiak L., Rawson, 1960
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Wapumon L., Sawchyn, 1975a
Iskwatam L., Sawchyn, 1975a
McIntosh L., Koshinsky, 1971
Davis L., Sawchyn and Kardash, 1976
Dickens L., Sawchyn and Kardash, 1976
McLennan L., Sawchyn and Kardash, 1976

Cisco . . . .

Martin L., Sawchyn, 1978
Russell L., Sawchyn, 1978
Wollaston L., Rawson, 1959
Steephill L., Sawchyn, 1975a
The Two Rivers, Sawchyn, 1975a
Royal L., Sawchyn, 1975a
Fafard L., Sawchyn, 1975a
Reindeer L., Dean, 1975
Brabant L., Sawchyn and Kardash, 1976
Davin L., Liaw, 1976a
Wathaman L., Liaw, 1976a
Wierzycki L., Sawchyn and Kardash, 1976

Kazan Basin
Patterson L., F.M. Atton, coll. 1975

Arctic Basin
Milliken L., Barclay, 1983
Beaverlodge L., Barclay, 1983
Fontaine L., Dean, 1978a
Athabasca L., Kendall, 1924 (as _L_. _athabascae_)
Riou L., Dean, 1978c
East Archibald L., Barclay and Paquin, 1981
Cree L., Rawson, 1959
Giles L., Johnson, 1971a
Wapata L., Johnson, 1971a
Black L., Johnson, 1971a
Hannah L., Dean, 1978b

Cisco . . . .

Hatchet L., Johnson, 1971b
Nordbye L., Dean, 1978b
Lloyd L., E.L. Dean, coll. 1981
Preston L., E.L. Dean, coll. 1981
Patterson L., E.L. Dean, coll. 1981

Round whitefish, Prosopium cylindraceum (Pallas) Map 8

Churchill Basin

Mallen L., B. Paquin, coll. 1981

Pita L., Sawchyn, 1975a

Reindeer L., Novakowski, 1955; Dean, 1975

Royal L., Sawchyn, 1975a

Russell L., Sawchyn, 1978

Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959; Sawchyn, 1973

Arctic Basin

Athabasca L., Kendall, 1924; D.S. Rawson, USB, 1943; D.S. Rawson, ROM, 1945; Atton, 1971

Black L., Johnson, 1971a

Cree L., Rawson, 1959

Cluff Cr., Sawchyn, 1975b

Ena L., Barclay and Whiting, 1981

Fontaine L., Dean, 1978a

Fulton L., S. Swanson, coll. 1979

Hannah L., Dean, 1978b

Hatchet L., Johnson, 1971b

McFarlane R., Barclay and Paquin, 1981

Milliken L., Barclay, 1983

Riou L., Dean, 1978c

Thluicho L., Harper and Nichols, 1919; Kendall, 1924 (as P. preblei)

Wapata L., Johnson, 1971a

William R., Bidgood, 1972

Lake trout, Salvelinus namaycus (Walbaum) Map 9

Saskatchewan Basin
Namew L., Reed, 1959b
Amisk L., Rawson, 1952
Whiteswan L., Johnson, 1962 (introduced)
Little Bear L., Johnson, 1963b
Hanson, L., Sawchyn, 1967b
Deschambault L., Johnson, 1967
Mirond L., Johnson, 1967
Pelican L., Johnson, 1967
Sahli L., Lowe, 1972
Wildnest L., Sawchyn, 1967b

Constance L.)
Diefenbaker L.) Listed as stocked trout waters, 1981
Jade L.)

Churchill Basin
Cold L., R.B. Miller, coll. 1955
Primrose L., P. McCart, coll. 1978
Pierce L., W.K. Liaw, coll. 1979
Dore L., Ruggles, 1959a
Lac la Plonge, Ruggles, 1959b
Churchill L., Rawson, 1957
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Shagwenaw L., Fernet, 1975
Crean L., D.S. Rawson, coll. 1928
Kingsmere L., D.S. Rawson, coll. 1928
Waskesiu L., D.S. Rawson, ROM, 1928
Nipekamew L., Marshall, 1970
East Trout L., Marshall, 1970
Lac la Ronge, Rawson and Atton, 1953; C.C. Lindsey, coll. 1971

Lake trout . . . .

Nemeiben L., Koshinsky, 1964a
MacKay L., Koshinsky, 1964b; G.D. Koshinsky, NMC, 1966
Bartlett L., Koshinsky, 1968
Haugen L., Koshinsky, 1968
Contact L., Koshinsky, 1964b
Hebden L., Koshinsky, 1964b
Davis L., Sawchyn and Kardash, 1976
Dickens L., Sawchyn and Kardash, 1976
McLennan L., Sawchyn and Kardash, 1976; S. Nash, NMC, 1978
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b
Upper Foster L., Dean, 1979a
Mallen L., B. Paquin, coll. 1981
McDonald L., D. Fernet, coll. 1977
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a
Russell L., Sawchyn, 1978
Wollaston L., Rawson, 1959; Sawchyn, 1973; S. Nash, NMC, 1978
Davin L., Liaw, 1976a
Wathaman L., Liaw, 1976a
Wierzycki L., Sawchyn and Kardash, 1976
Windrum L., N. Ferrier, coll. 1949
Reindeer L., Novakowski, 1955; Dean, 1975
Lac Eauclaire, Listed as stocked trout water, 1981

Arctic Basin

Ena L., Barclay and Whiting, 1981
Beaverlodge L., Swanson, 1982; Barclay, 1983
Fredette L., Swanson, 1982; Barclay, 1983

Lake trout . . . .

Fulton L., S. Swanson, coll. 1979

Milliken L., Swanson, 1982; Barclay, 1983

Fontaine L., Dean, 1978a

Waterloo L., Willard, Sawchyn and Light, 1977

Athabasca L., Preble, 1908; Kendall, 1924; D.S. Rawson, USB, 1943; D.S. Rawson, ROM, 1945; Rawson, 1947; Johnson, 1971c

Cluff L., Sawchyn, 1975b

Murison L., Dean, 1981

Riou L., Dean, 1978c

Broach L., Dean, 1981

Careen L., F.M. Atton, coll. 1954

Harrison L., Dean, 1981

Harbo L., Dean, 1981

Hodge L., Dean, 1981

Cree L., Rawson, 1959; S. Nash, NMC, 1978

Giles L., Johnson, 1970; Johnson, 1971a

Wapata L., Johnson, 1970

Black L., Johnson, 1970; Johnson, 1971a

Hatchet L., Johnson, 1971b

Waterbury L., D. Krochak, coll. 1978

Hannah L., Dean, 1978b

Nordbye L., Dean, 1978b

Henday L., D. Krochak, coll. 1978

Lloyd L., E.L. Dean, coll. 1981

Preston L., E.L. Dean, coll. 1981

Forrest L., E.L. Dean, coll. 1981

Patterson L., E.L. Dean, coll. 1981

Beet L., E.L. Dean, coll. 1981

Arctic grayling, Thymallus arcticus (Pallas) Map 10

Churchill Basin

Bow R., M.Y. Chen, coll. 1978 (established introduction)
Downton L., F.M. Atton, coll. 1954 (introduced)
Lac la Ronge, G. Roberts, coll. 1960 (introduced)
Reindeer L., Novakowski, 1955; Dean, 1975
Reindeer R., Rawson, 1950
Cochrane R., Rawson, 1950
Highrock L., Dean, 1980a
Key L., Sawchyn, 1978
Umpherville R., F. Hunter and S. Nash, NMC, 1978
Geikie R., Rawson, 1950
Collins Cr., F.M. Atton, coll. 1982, 1983
Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959b; Sawchyn, 1973
Ithingo L., G.H. Nelson, coll. 1953
Mudjatik R., G.H. Nelson, coll. 1953 (Grand Rapids)
Berna L., listed as stocked waters, 1981
Pine L., listed as stocked waters, 1981

Arctic Basin

Athabasca L., Preble, 1908; Kendall, 1924, D.S. Rawson, USB, 1943; D.S. Rawson, ROM, 1945; Rawson, 1947; Atton, 1971
Low L., Willard, Sawchyn and Light, 1977
Archibald R., Barclay and Paquin, 1981
McFarlane R., Barclay and Paquin, 1981
William R., Bidgood, 1971; Barclay and Paquin, 1981
Dumville Cr., Bidgood, 1971
Cluff Cr., Sawchyn, 1975b
Douglas R., Sawchyn, 1975b
Carpenter L., D. McLeod, coll. 1980
Ubiquity L., D. McLeod, coll. 1980

Arctic grayling . . . .

Cree L., Rawson, 1950; Rawson, 1959b; S. Nash, NMC, 1978
Wapata L., Johnson, 1971a
Black L., Johnson, 1971a
Sullivan L., Rawson, 1950 (probably Middle L.)
Hatchet L., Johnson, 1971b
Fond du Lac, Rawson, 1950; R.J.F. Smith, coll. 1976
Middle L., P. Bowden, coll. 1974
Careen L., F.M. Atton, coll. 1954
Clearwater R., F.M. Atton, coll. 1954
Portage La Loche, Rawson, 1950
Lloyd L., E.L. Dean, coll. 1981
Preston L., E.L. Dean, coll. 1981

Goldeye, Hiodon alosoides (Rafinesque) Map 11

Missouri Basin

E. Poplar R., D.E. Snell, coll. 1976

Qu'Appelle Basin

Buffalo Pound L., R.P. Johnson, ROM, 1959

Saskatchewan Basin

S. Saskatchewan R., D.S. Rawson, USB, 1941; D.S. Rawson, ROM, 1941; Rawson, 1949; Reed, 1962; D.A. Fernet, NMC, 1972; B. Paquin, coll. 1981; R.E. Jensen, coll. 1982

Diefenbaker L., Smith, 1974a; M.E. Swanson, coll. 1975

Blackstrap Res., L.M. Royer, coll. 1972

N. Saskatchewan R., Gilchrist, 1892; Reed, 1962; R.J.F. Smith, coll. 1972; B. Paquin, coll. 1981

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Tobin L., Royer, 1969

Cumberland L., Reed, 1962; Royer, 1966

Arctic Basin

Athabasca L., Preble, 1908; Kendall, 1924; D.S. Rawson, ROM, 1943; Rawson, 1947; Johnson, 1972 (in Alberta)

Mooneye, *Hiodon tergisus* Lesueur Map 12

Qu'Appelle Basin

Crooked L., Atton and Johnson, 1962

Round L., Atton and Johnson, 1962

Lake of the Prairies, R.E. Jensen, coll. 1983

Saskatchewan Basin

S. Saskatchewan River, F.M. Atton, coll. 1952; R.J.F. Smith, coll. 1972

Saskatchewan R., Reed, 1962

Cumberland L., D.S. Rawson, ROM, 1928; W.M. Sprules and K.H. Doan, ROM, 1946; Sprules and Doan, 1947; Rawson, 1949; Reed, 1962; Royer, 1966

Central mudminnow, Umbra limi (Kirtland) Map 13

Saskatchewan Basin
  Birch R., Royer, 1966

Northern pike, Esox lucius Linnaeus Map 14

Missouri Basin

Frenchman R., L. Bevan, coll. 1978

Bolster Cr., C. Low, coll. 1981

Poplar R., C. Low, coll. 1981

East Poplar R., D.E. Snell, coll. 1976

Qu'Appelle Basin

Souris R., L. Wallin, coll. 1975; G. Pierce, coll. 1976

White Bear L., Smith, 1974b

Roughbark Cr., G. Pierce, coll. 1976

Jabe L., Smith, 1974b

Moose Mountain Cr., G. Pierce, coll. 1976

Boundary Res., Sawchyn, Kardash and Cullimore, 1977

Gillis L., Royer, 1962a; Smith, 1974b

Kenosee L., Royer, 1962a; Smith, 1974b

Qu'Appelle R., A. Halkett, NMC, 1907

Buffalo Pound L., Gilchrist, 1888; R.P. Johnson, ROM, 1959; Johnson and Koshinsky, 1961

Fishing L., Gilchrist, 1888 (Pasqua L.)

Pasqua L., J.E. Moore, ROM, 1941; Atton and Johnson, 1962; C.C. Lindsey, coll. 1971

Echo L., A. Halkett, NMC, 1907; W.B. and M. Scott, ROM, 1955; P.H. Edwards, ROM, 1959; Atton and Johnson, 1962

Lebret L., Atton and Johnson, 1962

Katepwa L., Atton and Johnson, 1962

Round L., Atton and Johnson, 1962

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Last Mountain L., Rawson, 1942; Atton and Murray, 1952; Smith, 1976

Crystal L., J.R. Marchinko, coll. 1948

Northern pike . . . .

Winnipegosis Basin
  Overflowing R., Larson, 1976
  Shand Cr., Larson, 1976
  Piwei R., Larson, 1976
  Pepaw R., Larson, 1976
  Greenwater L., Royer, 1962b
  Marean L., Royer, 1962b
  Madge L., Rawson, 1942; Kirch, 1960

Saskatchewan Basin
  Swiftcurrent Cr., E.L. Dean, coll. 1981
  South Saskatchewan R., D.S. Rawson, USB, 1941; Reed, 1962
  Diefenbaker L., Smith, 1974a
  North Saskatchewan R., Gilchrist, 1892; Reed, 1962
  Sturgeon L., Mendis, 1956
  Jackfish L., Atton and Novakowski, 1956; Naftel, 1965; Liaw, 1978
  Murray L., Naftel, 1965; Liaw, 1978
  Turtle L., Rawson, 1942; Sawchyn, 1967a
  Emma L., Rawson, 1942; U.T. Hammer, coll. 1969
  Christopher L., Rawson, 1942
  Round L., Rawson, 1942 (NW of Prince Albert)
  Little Loon L., Rawson, 1942
  Eagle Cr., R.J.F. Smith, coll. 1971
  Saskatchewan R., Reed, 1962; Sawchyn, 1980
  Tobin L., Royer, 1969
  Cumberland L., Reed, 1959b; Reed, 1962
  Namew L., Reed, 1959b
  Wakaw L., Mendis, 1956
  Torch R., Edwards, 1966b

Northern pike . . . .

Fairy Glen L., Edwards, 1966a
Ispuchaw L., Edwards, 1966a
Zeden L., Edwards, 1966a
Little Sandy L., Johnson, 1962
Pinkney L., Johnson, 1962
Lost Echo L., Edwards, 1966a
Candle L., Johnson, 1963a
Fox Cr., Larson, 1976 (54°16' 104°28')
Whiteswan L., Johnson, 1962
White Gull Cr., Edwards, 1966b
Baldy L., Edwards, 1966a
Lower Fishing L., Royer, 1964
Upper Fishing L., Royer, 1964
McDougal Cr., Larson, 1976
Limestone L., Lane, 1967a
Dupueis L., Edwards, 1966a
Johnson L., Lane, 1967a
Annabel L., Lane, 1967a
Gillingham L., Lane, 1967a
Winteringham L., Lane, 1967a
Tyrrell L., Lane, 1967a
Little Bear L., Johnson, 1963b
Big Sandy L., Lane, 1967a
Nesootao L., Lane, 1967a
Hamell L., Lane, 1967a
Puskwakau R., Johnson, 1969
Deschambault L., Johnson, 1967
Jan L., Johnson, 1967
Mirond L., Johnson, 1967
Pelican L., Johnson, 1967

Northern pike . . . .

Sahli L., Lowe, 1972
Wildnest L., Sawchyn, 1967b
Manawan L., Schmidt, 1970
Wood L., Schmidt, 1970
Lindstrom L., Schmidt, 1970
Wapawekka L., Chen, 1975
Granite L., Sawchyn, 1967c
Amisk L., Rawson, 1952
Suggi L., D.W. Anderson, coll. 1965

Churchill Basin
Primrose L., B.L. Christensen, coll. 1978
Cold L., R.B. Miller, coll. 1955; P. McCart, coll. 1978
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Jeannette L., Rawson, 1942
Kimball L., Lane, 1969
Greig L., Lane, 1967b; C.C. Lindsey, coll. 1971
Makwa L., Rawson, 1942
Waterhen L., Rawson, 1942; Atton and Novakowski, 1956b
Delaronde L., Liaw, 1976b
Cowan L., Liaw, 1978a
Tie L., Liaw, 1975
Hackett L., Liaw, 1976c
Dore L., Ruggles, 1959a; Johnson, 1968
Lac la Plonge, Ruggles, 1959b
Green L., Naftel, 1965
Beaver R., Royer, 1972
Keeley L., Kallemeyn, 1972a
Utikumak L., Kallemeyn, 1972a

Northern pike . . . .

Canoe L., Ruggles, 1959b; Kallemeyn, 1969
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Big Peter Pond L., Rawson, 1957
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Frobisher L., Rawson, 1957
Turnor L., Kallemeyn, 1973b
Lac la Loche, Kallemeyn, 1972b
Wasekamio L., Kallemeyn, 1973b
Shagwenaw L., Fernet, 1975
Besnard L., Chen, 1974
Trout L., Koshinsky, 1971
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Nistowiak L., Rawson, 1960
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Drope L., Rawson, 1960
Keg L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Wapumon L., Sawchyn, 1975a
Iskwatam L., Sawchyn, 1975a
Bartlett L., Koshinsky, 1968
Haugen L., Koshinsky, 1968
Bielby L., Koshinsky, 1968
Sim L., Koshinsky, 1968
Contact L., Koshinsky, 1964b

Northern pike . . . .

Hebden L., Koshinsky, 1964b
Sulphide L., Koshinsky, 1964b
Davis L., Sawchyn and Kardash, 1976
Dickens L., Sawchyn and Kardash, 1976
McLennan L., Sawchyn and Kardash, 1976; S. Nash, NMC, 1978
McIntosh L., Koshinsky, 1971
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b
Upper Foster L., Dean, 1979a
Parks L., W.W. Sawchyn, coll. 1972
Key L., Sawchyn, 1978
Umpherville R., F. Hunter and S. Nash, NMC, 1978
McClean L., B. Paquin, coll. 1981
Kewen L., B. Paquin, coll. 1981
Torwalt L., B. Paquin, coll. 1981
Russell L., Sawchyn, 1978
Wheeler R., Sawchyn, 1978
Martin L., Sawchyn, 1978
Mallen L., B. Paquin, 1981
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a
Wollaston L., Rawson, 1959; Sawchyn, 1973; S. Nash, NMC, 1978
Elaine L., Low and Fernet, 1974a
Randall L., Low and Fernet, 1974a
Pinehouse L., Chen, 1973
Crean L., D.S. Rawson, 1928
Kingsmere L., D.S. Rawson, 1928 (Little Trout L.)
Waskesiu L., D.S. Rawson, ROM, 1928
Nipekamew L., Marshall, 1970
East Trout L., Marshall, 1970

Northern pike . . . .

Lac la Ronge, Rawson and Atton, 1953; Koshinsky, 1979
Nemeiben L., Koshinsky, 1964a
MacKay L., Koshinsky, 1964b
Little Deer L., Koshinsky, 1964b
Bigstone L., Mendis, 1956
Montreal L., Mendis, 1956
Weyakwin L., Low and Fernet, 1974b
Lynx L., Koshinsky, 1968
MacLennan L., Low and Fernet, 1974c
Brabant L., Sawchyn and Kardash, 1976
Davin L., Liaw, 1976a
Wathaman L., Liaw, 1976a
Wierzycki L., Sawchyn and Kardash, 1976
Steephill L., Sawchyn, 1975a
The Two Rivers, Sawchyn, 1975a
Royal L., Sawchyn, 1975a
Fafard L., Sawchyn, 1975a
Reindeer L., Novakowski, 1955; Dean, 1975

Kazan Basin
Patterson L., F.M. Atton, coll. 1975

Arctic Basin
Thainka L., F. Harper, NMC, 1914
Ena L., Barclay and Whiting, 1981
Low L., Willard, Sawchyn and Light, 1977
Waterloo L., Willard, Sawchyn and Light, 1977
Beaverlodge L., Swanson, 1982; Barclay, 1983
Fredette L., Swanson, 1982; Barclay, 1983

Northern pike . . . .

Milliken L., Swanson, 1982; Barclay, 1983
Fontaine L., Dean, 1978a
Athabasca L., Kendall, 1924; Rawson, 1947; Atton, 1971
Cluff L., Sawchyn, 1975b
Sandy L., Tones, 1979
East Archibald L., Barclay and Paquin, 1981
Douglas R., Sawchyn, 1975b
Archibald R., Barclay and Paquin, 1981
Cantara L., Barclay and Paquin, 1981
McFarlane R., Barclay and Paquin, 1981
Royal L., Barclay and Paquin, 1981
William R., Barclay and Paquin, 1981
Ennuyeuse Cr., Bidgood, 1972
Dumville Cr., Bidgood, 1972
Minto L., Dean, 1981
Murison L., Dean, 1981
Riou L., Dean, 1978c
Careen L., F.M. Atton, coll. 1954
Broach L., Dean, 1981
Gedak L., Dean, 1981
Harrison L., Dean, 1981
Harbo L., Dean, 1981
Hodge L., Dean, 1981
Lloyd L., E.L. Dean, coll. 1981
Preston L., E.L. Dean, coll. 1981
Forrest L., E.L. Dean, coll. 1981
Patterson L., E.L. Dean, coll. 1981
Beet L., E.L. Dean, coll. 1981
Carpenter L., D. McLeod, coll. 1980

Northern pike . . . .

Ubiquity L., D. McLeod, coll. 1981
Cree L., Rawson, 1959; S. Nash, NMC, 1978
Wapata L., Johnson, 1971a
Giles L., Johnson, 1971a
Black L., Johnson, 1970
McMahon L., D.K. Krochak, coll. 1978
Unknown L., D.K. Krochak, coll. 1978
Waterbury L., D.K. Krochak, coll. 1978
Hatchet L., Johnson, 1971b
Hannah L., Dean, 1978b
Nordbye L., Dean, 1978b
Henday L., D.K. Krochak, coll. 1978

Internal Basins
Fishing L., Royer, 1961b

Lake chub, *Couesius plumbeus* (Agassiz) Map 15

Missouri Basin

Battle Cr., T.A. Willock, NMC, 1967

Lodge Cr., T.A. Willock, NMC, 1967; J.S. Nelson, coll. 1973

Middle Cr., J.S. Nelson, coll. 1973; L. Bevan, coll. 1980

Frenchman R., W.B. and M. Scott, ROM, 1955; T.A. Willock, NMC, 1967; C. Gruchy, NMC, 1970; L. Bevan, coll. 1978; B.L. Christensen, coll. 1981

Lonepine Cr., T.A. Willock, NMC, 1967

Cypress L., W.B. & M. Scott, ROM, 1955

Poplar R., T.A. Willock, NMC, 1970; C. Low, coll. 1981

East Poplar R., D.E. Snell, coll. 1976; C. Low, coll. 1981

Girard Cr., C. Low, coll. 1981

Fife L., D.E. Snell, coll. 1976

Bolster Cr., C. Low, coll. 1981

Saskatchewan Basin

Swift Current Cr., F.M. Atton, ROM, 1953; C.G. Gruchy, NMC, 1970

South Saskatchewan R., Reed, 1962

Pike L., H.D. Athearn, NMC, 1965

Eaglehill Cr. R.J.F. Smith, coll. 1971, 1980

Saskatchewan R., Reed, 1959

Candle L., Johnson, 1963a

Torch R., P.H. Edwards, ROM, 1959; Edwards, 1966b

Fox Cr., Larson, 1976 (54°16' 104°28')

White Gull Cr., Edwards, 1966

McDougal Cr., Larson, 1976

Scarth R., Larson, 1975 (S. fork); Larson, 1976 (N. fork)

Mossy R., Larson, 1976

Amisk L., Rawson, 1952

Little Bear L., Johnson, 1963b

Lake chub . . . .

Wapawekka L., Chen, 1975
Deschambault L., Johnson, 1967
Mirond L., Johnson, 1967
Wood L., Schmidt, 1970
Sahli L., Lowe, 1972

Churchill Basin
Delaronde L., Rawson and Moore, 1944
Lac la Plonge, Ruggles, 1959
Martineau R., P. McCart, coll. 1978
Cold L., P. McCart, coll. 1978
Lac des Iles, Atton and Novakowski, 1956
Twoforks R., I. Sutherland, NMC, 1978
Pinehouse L., Chen, 1973
Canoe L., Ruggles, 1959; Kallemeyn, 1969
Little Peter Pond L., D.S. Rawson, ROM, 1952; Rawson, 1957; Kallemeyn, 1973
Churchill L., Kallemeyn, 1973
Rabbit Cr., S. Nash, NMC, 1978 ($54^{0}54'$ $105^{0}20'$)
Lac la Ronge, Rawson and Atton, 1953; W.H. VanVliet, NMC, 1964; Brown, Hammer and Koshinsky, 1970
Nemeiben L., Koshinsky, 1964
McKay L., ...ROM, 1967
Bartlett L., Koshinsky, 1968
Bielby L., Koshinsky, 1968
Barker L., G.D. Koshinsky, NMC, 1965
Dead L., G.D. Koshinsky, NMC, 1965
Otter L., Rawson, 1960
Mountain L., Rawson, 1960

Lake chub . . . .

Drope L., Rawson, 1960
Nistowiak L., Rawson, 1960
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Iskwatam L., Sawchyn, 1975a
Wapumon L., Sawchyn, 1975a
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a
Wheeler R., Sawchyn, 1978
Russell L., Sawchyn, 1978
Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959; Sawchyn, 1973
Reindeer L., D.S. Rawson, ROM, 1942; Novakowski, 1955; Dean, 1975
Huber L., F. Harper, NMC, 1914

Arctic Basin
Hatchet L., Johnson, 1971b
Black L., Johnson, 1971a
Giles L., Johnson, 1971a
Wapata L., Johnson, 1971a
Cree L., D.S. Rawson, ROM, 1955; Rawson, 1959; S. Nash, NMC, 1978
Preston L., E.L. Dean, coll. 1981
Forrest L., E.L. Dean, coll. 1981
Beet L., E.L. Dean, coll. 1981
Athabasca L., F. Harper, NMC, 1914; D.S. Rawson, ROM, 1943; Atton, 1971; Barclay and Paquin, 1981

Lake chub . . . .

Dumville Cr., B.F. Bidgood, coll. 1971
William R., Barclay and Paquin, 1981
Archibald R., Barclay and Paquin, 1981
Riou L., Dean, 1978c
Greer L., Swanson, 1982
Fookes L., Swanson, 1982
Fulton L., S. Swanson, coll. 1979
Marie L., S. Swanson, coll. 1979
Beaverlodge L., Swanson, 1982; Barclay, 1983

Internal Basins

Wood R., G.C. MacDonald, ROM, 1926; T.A. Willock, NMC, 1970
Thomson L., Royer, 1961a
Russell Cr., J.K. Durbin, coll. 1982

Flathead chub, *Hybopsis gracilis* (Richardson) Map 16

Missouri Basin

Frenchman R., C.G. Gruchy, NMC, 1970

Saskatchewan Basin

South Saskatchewan R., Richardson, 1836; D.S. Rawson, ROM, 1941; D.S. Rawson, USB, 1941; Rawson, 1949; F.M. Atton, ROM, 1953; Olund and Cross, KU, 1961; R.E. Jensen, coll. 1982

North Saskatchewan R., W.W. Sawchyn, coll. 1976

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Cumberland L., Royer, 1966

Tobin L., Royer, 1969

Arctic Basin

Athabasca L., Kendall, 1924; Rawson, 1947

Fathead minnow, Pimephales promelas Rafinesque Map 17

Missouri Basin

- Lodge Cr., T.A. Willock, NMC, 1967; J.S. Nelson, coll. 1973
- Battle Cr., T.A. Willock, NMC, 1967
- Middle Cr., J.S. Nelson, coll. 1973
- Lodge Cr. tributary, F.R. Cook, NMC, 1961
- Frenchman R., W.B. and M. Scott, ROM, 1955; T.A. Willock, NMC, 1967; C.G. Gruchy, NMC, 1970
- Loch Lomond L., D.S. Rawson, ROM, 1938; W.B. and M. Scott, ROM, 1955
- Loch Leven L., H. Sutherland, SMNH, 1975
- Lonepine Cr., W.B. and M. Scott, ROM, 1955; T.A. Willock, NMC, 1967
- Cypress L., W.B. and M. Scott, ROM, 1955
- Belanger Cr., R.M. Johnstone, ROM, 1927
- Fife L., U.T. Hammer, USB, 1971; D.E. Snell, coll. 1976; J.K. Durbin, coll. 1981
- Girard Cr., C. Low, coll. 1981; R. MacCulloch, SMNH, 1982
- Bolster Cr., C. Low, coll. 1981
- Poplar R., T.A. Willock, NMC, 1970; C. Low, coll. 1981
- East Poplar R., D.E. Snell, coll. 1976

Qu'Appelle Basin

- Moose Jaw Cr., F.R. Cook, NMC, 1961
- Boggy Cr., R. MacCulloch, SMNH, 1981
- Buffalo Pound L., Johnson and Koshinsky, 1961; J.K. Durbin, coll. 1981
- Last Mountain L., Atton and Murray, 1952; U.T. Hammer, USB, 1971; Smith, 1976
- Pasqua L., Atton and Johnson, 1962; Johnson, 1963c; T.A. Willock, NMC, 1970
- Echo L., A. Halkett, NMC, 1907; W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c
- Lebret L., Atton and Johnson, 1962
- Katepwa L., Atton and Johnson, 1962

Fathead minnow . . . .

Round L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1982

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Qu'Appelle R., A. Halkett, NMC, 1907; J. Dosman, ROM, 1959; R. MacCulloch and Russon, SMNH, 1981

White Bear L., Smith, 1974b (Carlyle L.)

Nickle L., R. Kreba, SMNH, 1969

Pipestone Cr., R. Hooper, SMNH, 1976

Roughbark Cr., G. Pierce, coll. 1976; R. MacCulloch, SMNH, 1981

Gillis L., Royer, 1962a; Smith, 1974b

Burgess L., Smith, 1974b

Clearwater L., Smith, 1974b

Antler R., W.B. and M. Scott, ROM, 1955; C.G. Gruchy, NMC, 1970

Cannington L., Royer, 1962a; Smith, 1974b

Sandy L., Smith, 1974b

Scott L., Smith, 1974b

Spring L., Smith, 1974b

Stevenson L., Smith, 1974b

Hassard L., Smith, 1974b

Jabe L., Smith, 1974b

Hewitt L., Smith, 1974b

Kenosee L., D.S. Rawson, ROM, 1938

Little Kenosee L., Smith, 1974b

Souris R., F.M. Atton, ROM, 1953; W.B. and M. Scott, ROM, 1955; R. MacCulloch, SMNH, 1982; E.L. Dean, coll. 1983

Moose Mountain Cr., G. Pierce, coll. 1976; T.A. Willock, NMC, 1970

Long Cr., G. Pierce, coll. 1976

Boundary Res., Sawchyn and Kardash, 1977

.... Cr., R. MacCulloch, SMNH, 1981 (Willow Br.?)

Whitesand R., R.E. Jensen, coll. 1983

Fathead minnow . . . .

Winnipegosis Basin

Fir R., Larson, 1976

Teepee Cr., Larson, 1975

Dillabough Cr., Larson, 1976 ($52^\circ 33'$ $102^\circ 46'$)

Piwei R., Larson, 1976

Madge L., D.S. Rawson, ROM, 1938; Kirch, 1960

Saskatchewan Basin

Swiftcurrent Cr., F.M. Atton, ROM, 1953; Reed, 1962; C.G. Gruchy, NMC, 1970; R. MacCulloch, SMNH, 1981

Bone Cr., J.K. Durbin, coll. 1981

Fairwell Cr., P.H. Edwards, coll. 1963

South Saskatchewan R., Reed, 1962

Beaver Cr., R.J.F. Smith, coll. 1976

Blackstrap Res., R.J.F. Smith, coll. 1978

Moon L., R.J.F. Smith, coll. 1975

Pike L., R.J.F. Smith, coll. 1980

North Saskatchewan R., Reed, 1962

Turtle L., R.J. Mennie, NMC, 1975

Emma L., R.J. Mennie, NMC, 1975

Belliveau L., D. Fernet, coll. 1977

Opuntia L., U.T. Hammer, USB, 1971

Saskatchewan R., Sawchyn, 1980

English Cr., D. Sakal, coll. 1982

Cumberland L., Royer, 1966

Namew L., Reed, 1959b

Redearth L., G. Rolles, coll. 1965

Connell Cr., J.K. Durbin, coll. 1981

Birchbark Cr., R.P. Johnson, coll. 1977

Hanin Cr., R. Orr, coll. 1982

Fathead minnow . . . .

White Gull R., Larson, 1976 (tributary)
Piprell L., Johnson, 1961
Caribou Cr., R.J.F. Smith, coll. 1977
Zeden L., J.K. Durbin, coll. 1982
Limestone L., Lane, 1967a
Sealey L., Edwards, 1966a
Hanson L., Sawchyn, 1967b
Mossy R., Larson, 1975
McDougal Cr., Larson, 1976
Scarth R., Larson, 1975 (S. fork)
Lower Fishing L., Royer, 1964
Upper Fishing L., Royer, 1964
Amisk L., D.S. Rawson, ROM, 1951; Rawson, 1952
Big Sandy L., Lane, 1967a
Jan L., Johnson, 1967
Pelican L., Johnson, 1967
Deschambault L., Johnson, 1967
Wildnest L., Sawchyn, 1967b
Johnson L., Lane, 1967a
Annabel L., Lane, 1967a
Winteringham L., Lane, 1967a
Sarginson L., Lane, 1967a
Tyrrell L., Lane, 1967a
Manawan L., Schmidt, 1970
Wood L., Schmidt, 1970
Lindstrom L., Schmidt, 1970
Wapawekka L., Chen, 1975

Fathead minnow . . . .

Churchill Basin

Cold L., P. McCart, coll. 1978
Cold R., W.K. Liaw, coll. 1979
Pierce L., W.K. Liaw, coll. 1979
Beaver R., Royer, 1972
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Matheson L., R.J. Mennie, NMC, 1975
Greig L., Lane, 1967b
Waterhen R., W.K. Liaw, coll. 1979
Waterhen L., Atton and Novakowski, 1956b
Delaronde L., D.S. Rawson, ROM, 1942; Liaw, 1976b
Cowan L., Liaw, 1978a
Dore L., Johnson, 1968
Lac la Plonge, C.P. Ruggles, ROM, 1957; Ruggles, 1959b
Canoe L., Kallemeyn, 1969
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Turnor L., Kallemeyn, 1973b
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Shagwenaw L., Fernet, 1975
Pinehouse L., Chen, 1973
Besnard L., Chen, 1974
Trout L., Koshinsky, 1971
Dead L., G.D. Koshinsky, NMC, 1965
Mountney L., G.D. Koshinsky, NMC, 1965
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Drope L., Rawson, 1960
Nistowiak L., Rawson, 1960

Fathead minnow . . . .

Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Wapumon L., Sawchyn, 1975a
Wintego L., Sawchyn, 1975a
Pikoo L., W.K. Liaw, coll. 1983
Reeds L., W.K. Liaw, coll. 1983
Steephill L., Sawchyn, 1975a
Nipekamew Cr., Larson, 1976
Waskesiu L., D.S. Rawson, ROM, 1928
McKenzie Cr., Larson, 1975
Nemeiben L., Koshinsky, 1964a

Internal Basins
Maple Cr., T.A. Willock, NMC, 1967
Junction Res., W.B. and M. Scott, ROM, 1955
Wood R., T.A. Willock, NMC, 1970
Thompson L., Royer, 1961a
Cadillac Cr., R. MacCulloch, SMNH, 1981 (49°49' 107°44')
Twelve Mile L., U.T. Hammer, USB, 1971
Chaplin Cr., R. MacCulloch, SMNH, 1981
Old Wives L., U.T. Hammer, USB, 1971; K. Roney, SMNH, 1981
Redberry L., D.S. Rawson, ROM, 1938
.... Cr., R.J.F. Smith, coll. 1980 (N. end of Redberry L.)
Lenore L., D.S. Rawson, ROM, 1938; U.T. Hammer, coll. 1971

Pearl dace, Semotilus margarita (Cope) Map 18

Missouri Basin
- Battle Cr., P.H. Edwards, coll. 1963
- Lodge Cr., J.S. Nelson, coll. 1973
- Cypress L., W.B. and M. Scott, ROM, 1955
- Loch Lomond, W.B. and M. Scott, ROM, 1955
- Lonepine Cr., T.A. Willock, NMC, 1967
- Frenchman R., W.B. and M. Scott, ROM, 1955
- Poplar R., T.A. Willock, NMC, 1970
- East Poplar R., D.E. Snell, coll. 1976
- Fife L., D.E. Snell, coll. 1976; J.K. Durbin, coll. 1981

Qu'Appelle Basin
- Moose Mountain Cr., F.M. Atton, ROM, 1954
- Pipestone Cr., D. Chaskavitch, coll. 1976
- Whitesand R., J. Stock, coll. 1982

Winnipegosis Basin
- Piwei R., Larson, 1976
- Prairie R., Larson, 1976 (E. fork)
- Teepee Cr., Larson, 1976
- Ruby L., R. Todd, coll. 1971
- Greenbush R., ...ROM, 1958

Saskatchewan Basin
- Swiftcurrent Cr., Reed, 1962
- Bone Cr., J.K. Durbin, coll. 1981
- South Saskatchewan R., Reed, 1962
- Eagle Cr., F.M. Atton, coll. 1954

Pearl dace . . . .

Saskatchewan R., Sawchyn, 1980
Connell Cr., J.K. Durbin, coll. 1981
Otosquen R., Larson, 1975
Torch R., P.H. Edwards, ROM, ...
White Gull Cr., G. Tyson, coll. 1971
Caribou Cr., R.J.F. Smith, coll. 1978
McDougal Cr., Larson, 1976
Scarth R., Larson, 1976 (S. fork)
Trapper Cabin Cr., Larson, 1976 ($54^{0}08'$ $104^{0}27'$)
Mossy R., D.J. Larson, coll. 1975
Wapawekka L., Chen, 1975

Churchill Basin
Cold L., P. McCart, coll. 1978
Delaronde L., D.S. Rawson, ROM, 1938 (Stony L.); D.S. Rawson, ROM, 1942
Lac la Plonge, L. Kratt, coll. 1979
Elaine L., Low and Fernet, 1974
Massinahigan R., L. Kratt, coll. 1979
McKenzie Cr., Larson, 1975
Nipekamew R., Larson, 1976 (headwater)
Davin L., Liaw, 1976a
Wathaman L., Liaw, 1976a
Collins Cr., D. Troubridge, coll. 1983
Wollaston L., D. Waite, coll. 1983

Kazan Basin
Patterson L., F.M. Atton, ROM, 1975

Pearl dace . . . .

Arctic Basin

Fulton L., S. Swanson, coll. 1979
Beaverlodge L., Swanson, 1982; Barclay, 1983
Athabasca L., Scott and Crossman, 1973

Internal Basins

Oscar Cr., R.J.F. Smith, coll. 1980 (N. end Redberry L.)
Lenore L., U.T. Hammer, USB, 1981

Creek chub, Semotilus atromaculatus (Mitchill) Map 19

Qu'Appelle Basin
  Scissors Cr., R. Mikolas, coll. 1973; C. Dunn, coll. 1982

Winnipegosis Basin
  Overflowing R., Larson, 1976
  Pepaw R., B. Stickler, coll. 1973
  Etomami R., P.H. Edwards, ROM, 1956
  Fir R., Larson, 1976
  Dillabough Cr., Larson, 1976
  Prairie R., Larson, 1976 (E. fork)

Saskatchewan Basin
  White Gull Cr., Larson, 1976
  Scarth R., Larson, 1976 (N. fork)
  Otosquen R., Larson, 1976

Churchill Basin
  Nipekamew R., Larson, 1976 (headwater)
  Bow R., D. Feld, coll. 1982

Finescale dace, Chrosomus neogaeus Cope = Phoxinus neogaeus Cope = Pfrille neogaea (Cope)

Map 20

Missouri Basin

Loch Lomond, W.B. and M. Scott, ROM, 1955
Lonepine Cr., W.B. and M. Scott, ROM, 1955; Willock, 1969
East Poplar R., D.E. Snell, coll. 1976

Winnipegosis Basin

Fishing R., Smith, 1978 (Manitoba)

Saskatchewan Basin

Icehouse Cr., R.P. Johnson, coll. 1977 (Candle L.)
Caribou Cr., Smith, 1978
McDougal Cr., Larson, 1976
Scarth R., Larson, 1976 (S. fork); Larson, 1976 (N. fork)
Trapper Cabin Cr., Larson, 1976 (54°08' 104°27')
Mossy R., Larson, 1976
Belliveau L., D.A. Fernet, coll. 1977 (53°30' 109°15')

Churchill Basin

Nipekamew Cr., Larson, 1976; Smith, 1978
.... Cr., Smith, 1978, ROM (54°43' 105°39')
.... L., L. Wallin, 1980 (54°45' 105°40')
Primrose L., B.L. Christensen, coll. 1978
Cold R., P. McCart, coll. 1978

Internal Basins

Wood R., ... ROM, 1926
.... Cr., Smith, 1978, ROM (N. end Redberry L.)
Oscar Cr., R.J.F. Smith, coll. 1982 (near Krydor)
Marshy Cr., F.M. Atton, coll. 1982
Loch Leven, Willock, 1969

Northern redbelly dace, Chrosomus eos Cope = Phoxinus eos (Cope) Map 21

Missouri Basin

Battle Cr., F. Cook, NMC, 1961; T.A. Willock, NMC, 1967
Lodge Cr., T.A. Willock, NMC, 1967; J.S. Nelson, coll. 1973
Middle Cr., L. Bevan, coll. 1980
Loch Lomond, W.B. and M. Scott, ROM, 1955
Lonepine Cr., W.B. and M. Scott, ROM, 1955; T.A. Willock, NMC, 1967
Cypress L., W.B. and M. Scott, ROM, 1955
Calf Cr., J.K. Durbin, coll. 1981
Fairwell Cr., P.H. Edwards, coll. 1963
Poplar R., T.A. Willock, NMC, 1970
East Poplar R., D.E. Snell, coll. 1976; C. Low, coll. 1981
Bolster Cr., C. Low, coll. 1981

Saskatchewan Basin

Bone Cr., J.K. Durbin, coll. 1981
English Cr., D. Sakal, coll. 1972
Saskatchewan R., W.W. Sawchyn, coll. 1976
Spruce R., J. Banks, coll. 1972
Zeden L., J.K. Durbin, coll. 1982
Ranger L., L. Wallin, coll. 1981
Gull Cr., D. Feld, coll. 1982
Piprell L., Johnson, 1961
Trapper Cabin Cr., Larson, 1976 (54°08' 104°27')

Churchill Basin

Delaronde L., Liaw, 1976
Nipekamew Cr., Larson, 1976
.... L., L. Wallin, coll. 1980 (54°45' 105°40')
.... L., Sawchyn and Kardash, 1976 (55°43' 104°41')

Longnose dace, Rhinichthys cataractae (Valenciennes) Map 22

Missouri Basin

Battle Cr., P.H. Edwards, coll. 1963; T.A. Willock, NMC, 1967

Middle Cr., J.S. Nelson, coll. 1973; L. Bevan, coll. 1980

Lodge Cr., T.A. Willock, NMC, 1967; J.S. Nelson, coll. 1973

Nine Mile Cr., J.K. Durbin, coll. 1982

Belanger Cr., B. Christensen, coll. 1983

Calf Cr., J.K. Durbin, coll. 1981

Concrete Cr., J.K. Durbin, coll. 1981

Lonepine Cr., T.A. Willock, NMC, 1967

Cypress L., W.B. and M. Scott, ROM, 1955

Frenchman R., T.A. Willock, NMC, 1967, 1970; C.G. Gruchy, NMC, 1970; L. Bevan, coll. 1978

Poplar R., T.A. Willock, NMC, 1970

East Poplar R., D.E. Snell, coll. 1976

Qu'Appelle Basin

Souris R., F.M. Atton, ROM, 1953; E.L. Dean, coll. 1983

Buffalo Pound L., Johnson and Koshinsky, 1961

Winnipegosis Basin

Overflowing R., Larson, 1976

Piwei R., Larson, 1976

Pepaw R., Larson, 1976

Fir R., Larson, 1976

Little Armit R., Larson, 1976

Kinakin Cr., Larson, 1976

Dillabough Cr., Larson, 1976

Etomami R., P.H. Edwards, ROM, 1956

Teepee Cr., B. Voth, coll. 1973

Swan R., M. Salzl, coll. 1982

Longnose dace . . . .

Saskatchewan Basin

Swiftcurrent Cr., F.M. Atton, ROM, 1953; Reed, 1962; C.G. Gruchy, NMC, 1970

Bone Cr., J.K. Durbin, coll. 1981

South Saskatchewan R., Reed, 1962

Aiktow Cr., R.P. Johnson, ROM, 1959

North Saskatchewan R., F.M. Atton, ROM, 1954; Reed, 1962

Spruce R., F.A. Leighton, NMC, 1975

Brightsand L., E. Moore, ROM, 1939

Eagle Cr., R.J.F. Smith, coll. 1980; F.M. Atton, coll. 1982

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Cumberland L., Reed, 1959b

Namew L., Reed, 1959b

Waskwei R., D.E. Snell, coll. 1962

Connell Cr., J.K. Durbin, coll. 1981

Torch R., P.H. Edwards, ROM, 1959; Edwards, 1966b

Candle L., Johnson, 1973a

White Gull Cr., Edwards, 1966b; Larson, 1976

McDougal Cr., Larson, 1976

Scarth R., Larson, 1975 (S. fork)

Churchill Basin

Primrose L., B.L. Christensen, coll. 1978

Cold L., P. McCart, coll. 1978; W.K. Liaw, coll. 1979

Pierce L., W.K. Liaw, coll. 1979

Lepine L., W.K. Liaw, coll. 1979

Dore L., Johnson, 1968

Beaver R., Royer, 1972

Pinehouse L., Chen, 1973

McIntosh L., Koshinsky, 1971

Longnose dace . . . .

Crew L., G.D. Koshinsky, NMC, 1965
Devil L., G.D. Koshinsky, NMC, 1965
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Nistowiak L., Rawson, 1960
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Drope L., Rawson, 1960
Keg L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b
Upper Foster L., Dean, 1979a
Waskesiu L., D.S. Rawson, ROM, 1928
Kingsmere R., Rawson, 1928
Bow R., K. Roney, SMNH, 1982
McKenzie Cr., Larson, 1976
Weyakwin L., R.J. Mennie, NMC, 1975
Lac la Ronge, G.D. Koshinsky, NMC, 1963

Arctic Basin
Archibald L., Barclay and Paquin, 1981
McFarlane R., Barclay and Paquin, 1981

Internal Basins
Gap Cr., ... ROM, 1958
Russell Cr., J.K. Durbin, coll. 1982

Blacknose dace, Rhinichthys atratulus (Hermann) Map 23

Qu'Appelle Basin
  Scissors Cr., C. Dunn, coll. 1982
  Assiniboine R., F.R. Cook, NMC, 1962; J. Stock, coll. 1982

Saskatchewan Basin
  Trapper Cabin Cr., Larson, 1976 (54°08' 104°27')
  Scarth R., Larson, 1976 (S. fork)
  Mossy R., Larson, 1976

Winnipegosis Basin
  Fir R., G.D. Koshinsky, NMC, 1962
  Pepaw R., Larson, 1976
  Teepee Cr., Larson, 1976
  Little Armit R., Larson, 1976
  Prairie R., Larson, 1976 (E. fork)
  Piwei R., Larson, 1976
  Kinakin Cr., Larson, 1976

Brassy minnow, Hybognathus hankinsoni Hubbs   Map 24

Missouri Basin

Lodge Cr., T.A. Willock, NMC, 1967; J.S. Nelson, coll. 1973

Frenchman R., W.B. and M. Scott, ROM, 1955; P.H. Edwards, ROM, 1955; L. Bevan, coll. 1978

Lonepine Cr., T.A. Willock, NMC, 1967

Cypress L., W.B. and M. Scott, ROM, 1955

Poplar R., T.A. Willock, NMC, 1970

East Poplar R., D.E. Snell, coll. 1976

Internal Basins

Junction Res., W.B. and M. Scott, ROM, 1955 (as Dickson Dam)

Gap Cr., ... ROM, 1958

Wood R., F.R. Cook, NMC, 1965; R. Parkes, ROM, 1981

Western silvery minnow, *Hybognatus argyritis* Girard Map 25

The following collections should be re-examined to confirm the identification:

Missouri Basin

Frenchman R., C.G. Gruchy, NMC, 1970 (as *H. nuchalis*)

Saskatchewan Basin

Tobin L., ... ROM, 1966 (as *H. nuchalis*)

Golden shiner, Notemigonus crysoleucus (Mitchill) Map 26

Qu'Appelle Basin
  Souris R., F.M. Atton, ROM, 1954; Atton and Johnson, 1955

Winnipegosis Basin
  Pepaw R., Larson, 1976

Emerald shiner, *Notropis atherinoides* Rafinesque

Map 27

Qu'Appelle Basin

Cannington L., Royer, 1962; Smith, 1974b

Kenosee L., Royer, 1962; Smith, 1974b

White Bear L., D.S. Rawson, ROM, 1938; Smith, 1974b (Carlyle L.)

Round L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Crooked L., Doyle, 1961; Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Katepwa L., Atton and Johnson, 1962

Lebret L., Atton and Johnson, 1962

Echo L., A. Halkett, NMC, 1907; W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c

Pasqua L., D.S. Rawson, ROM, 1938; J.E. Moore, ROM, 1941; Atton and Johnson, 1962; T.A. Willock, NMC, 1970

Buffalo Pound L., Johnson and Koshinsky, 1961; J.K. Durbin, coll. 1981

Last Mountain L., D.S. Rawson, ROM, 1938; Atton and Murray, 1952; Smith, 1976

Assiniboine R., R. MacCulloch, SMNH, 1981

Whitesand R., D. Sakal, coll. 1982

Lake of the Prairies, R.E. Jensen, coll. 1983

Saskatchewan Basin

South Saskatchewan R., D.S. Rawson, ROM, 1941; Reed, 1962; R.E. Jensen, coll. 1982

Diefenbaker L., Smith, 1974c

Lakeview L., J.J. Tinline, coll. 1982

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Tobin L., Royer, 1969

Cumberland L., Reed, 1959b; Royer, 1966

Namew L., Reed, 1959b

Emerald shiner . . . .

Torch L., R.P. Johnson, coll. 1977
Candle L., F.M. Atton, ROM, 1954; Johnson, 1963a; R.P. Johnson, coll. 1977
Limestone L., Lane, 1967a
Amisk L., D.S. Rawson, ROM, 1942; D.S. Rawson, ROM, 1951; Rawson, 1952
Big Sandy L., Lane, 1967a
Jan L., Johnson, 1967
Pelican L., Johnson, 1967
Deschambault L., Johnson, 1967
Sahli L., Lowe, 1972
Wood L., Schmidt, 1970
Manawan L., Schmidt, 1970
Lindstrom L., Schmidt, 1970
Wapawekka L., Chen, 1975
Wildnest L., Sawchyn, 1967b

Churchill Basin

Primrose L., B.L. Christensen, coll. 1978
Delaronde L., D.S. Rawson, ROM, 1942; Liaw, 1976b
Cowan L., Liaw, 1978a
Dore L., Johnson, 1968
Greig L., Lane, 1967b
Waterhen L., Atton and Novakowski, 1956b
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Canoe L., Kallemeyn, 1969
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Big Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b

Emerald shiner . . . .

Lac Ile-a-la-Crosse, D.S. Rawson, ROM, 1954; Rawson, 1957; Saylor, 1972
Pinehouse L., Chen, 1973
Besnard L., Chen, 1974
McIntosh L., G.D. Koshinsky, NMC, 1963; Koshinsky, 1971
Otter L., Rawson, 1960
Drinking L., Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Pita L., Sawchyn, 1975a
Pikoo L., W.K. Liaw, coll. 1983
The Two Rivers, Sawchyn, 1975a
Steephill L., Sawchyn, 1975a
Fafard L., Sawchyn, 1975a
Reindeer L., Novakowski, 1955; Dean, 1975
Wathaman L., Liaw, 1976a
Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959
Reeds L., W.K. Liaw, coll. 1983

Arctic Basin

Athabasca L., Kendall, 1924; D.S. Rawson, ROM, 1943; D.S. Rawson, USB, 1943; Atton, 1971
Ennuyeuse Cr., B.F. Bidgood, coll. 1972
Dumville Cr., B.F. Bidgood, coll. 1972
Beaverlodge L., Swanson, 1982; Barclay, 1983
Hatchet L., Johnson, 1971b

River shiner, Notropis blennius (Girard) Map 28

Qu'Appelle Basin

Qu'Appelle R., Eigenmann and Eigenmann, 1893

Buffalo Pound L., R.P. Johnson, ROM, 1959; Johnson and Koshinsky, 1961

Saskatchewan Basin

South Saskatchewan R., D.S. Rawson, ROM, 1941; Rawson, 1949; F.M. Atton, ROM, 1953; Reed, 1962; R.E. Jensen, coll. 1982; J.J. Merkowsky, coll. 1983

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Common shiner, Notropis cornutus (Mitchill) Map 29

Qu'Appelle Basin

Souris R., F.M. Atton, ROM, 1954; Atton and Johnson, 1955; W.B. & M. Scott, ROM, 1955; L. Wallin, coll. 1975; E.L. Dean, coll. 1983

Moose Mountain Cr., T.A. Willock, NMC, 1970; G. Pierce, coll. 1976

Antler R., W.B. and M. Scott, ROM, 1955

Scissors Cr., C. Dunn, coll. 1982

Whitesand R., P.H. Edwards, ROM, 1954; Atton and Johnson, 1955; R.E. Jensen, coll. 1983

Winnipegosis Basin

Pepaw R., Larson, 1976

Piwei R., Larson, 1976

Fir R., M. Salzl, coll. 1982

Blacknose shiner, Notropis heterolepis
Eigenmann and Eigenmann

Map 30

Qu'Appelle Basin

Qu'Appelle R., Eigenmann and Eigenmann, 1893
Round L., Atton and Johnson, 1962
Crooked L., J. Doyle, ROM, 1960; Doyle, 1961a; Atton and Johnson, 1962
Nelson L., R.E. Jensen, coll. 1983 ($52^{\circ}01'$ $102^{\circ}40'$)

Winnipegosis Basin

Greenwater L., D.S. Rawson, ROM, 1938; Royer, 1962b
Marean L., Royer, 1962b

Saskatchewan Basin

Namew L., Reed, 1959b
Amisk L., D.S. Rawson, ROM, 1942; D.S. Rawson, ROM, 1951; Rawson, 1952
Whiteswan L., Johnson, 1962
Lower Fishing L., Royer, 1964
Upper Fishing L., Royer, 1964
Baldy L., Edwards, 1966a
Big Sandy L., Lane, 1967a
Limestone L., Lane, 1967a
Jan L., Johnson, 1967
Pelican L., Johnson, 1967
Deschambault L., Johnson, 1967
Mirond L., Johnson, 1967
Wapawekka L., Chen, 1975
Wildnest L., Sawchyn, 1967b

Blacknose shiner . . . .

Churchill Basin
  Waskesiu L., D.S. Rawson, ROM, 1928
  Kingsmere L., Rawson, 1928 (Little Trout L.)
  Clare L., Rawson, 1928
  MacLennan R., R.J. Mennie, NMC, 1975
  Lac la Ronge, Rawson and Atton, 1953
  Nemeiben L., Koshinsky, 1964a

Spottail shiner, Notropis hudsonius (Clinton) Map 31

Qu'Appelle Basin

Qu'Appelle R., Eigenmann and Eigenmann, 1893; A. Halkett, NMC, 1907

Pasqua L., D.S. Rawson, ROM, 1938; J.E. Moore, ROM, 1941; Atton and Johnson, 1962; Johnson, 1963c; T.A. Willock, NMC, 1970

Echo L., A. Halkett, NMC, 1907; D.S. Rawson, ROM, 1938; D.S. Rawson, ROM, 1941; W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c

Lebret L., Atton and Johnson, 1962

Katepwa L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Round L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Last Mountain L., Atton and Murray, 1952; U.T. Hammer, USB, 1971; Smith, 1976

Nelson L., R.E. Jensen, coll. 1983 ($52^{o}01'$ $102^{o}40'$)

Good Spirit L., D.S. Rawson, ROM, 1938

Lake of the Prairies, R.E. Jensen, coll. 1983

Winnipegosis Basin

Greenwater L., D.S. Rawson, ROM, 1938; Royer, 1962b

Marean L., Royer, 1962b

Madge L., B. Sherstobitoff, coll. 1982

Pepaw R., Larson, 1976

Saskatchewan Basin

Saskatchewan R., Sawchyn, 1980

Tobin L., Royer, 1969

Cumberland L., Reed, 1959b; Royer, 1966

Namew L., Reed, 1959b

Spottail shiner . . . .

Turtle L., Sawchyn, 1967a; R.J. Mennie, NMC, 1975
Emma L., R.J. Mennie, NMC, 1975
Jackfish L., Atton and Novakowski, 1956; Naftel, 1965
Murray L., D.S. Rawson, ROM, 1938
Sturgeon L., Mendis, 1956
Wakaw L., Mendis, 1956; U.T. Hammer, USB, 1971, 1981
Candle L., Johnson, 1963a; R.P. Johnson, coll. 1977
Torch L., R.P. Johnson, coll. 1977
Fairy Glen L., Edwards, 1966a
Ispuchaw L., Edwards, 1966a
Zeden L., Edwards, 1966a
Lower Fishing L., Royer, 1964
Upper Fishing L., Royer, 1964
Limestone L., Lane, 1967a
Amisk L., D.S. Rawson, ROM, 1951; Rawson, 1952
Little Bear L., Johnson, 1963b
Big Sandy L., Lane, 1967a
Jan L., Johnson, 1967
Pelican L., Johnson, 1967
Deschambault L., Johnson, 1967
Wapawekka L., Chen, 1975
Wildnest L., Sawchyn, 1967b
Wood L., Schmidt, 1970
Manawan L., Schmidt, 1970
Lindstrom L., Schmidt, 1970

Churchill Basin
Primrose L., B.L. Christensen, coll. 1978
Cold L., W.K. Liaw, coll. 1979

Spottail shiner . . . .

Cold R., W.K. Liaw, coll. 1979
Pierce L., W.K. Liaw, coll. 1979
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Lepine L., W.K. Liaw, coll. 1979
Matheson L., R.J. Mennie, NMC, 1975
Greig L., Lane, 1967b
Waterhen L., Atton and Novakowski, 1956b
Kimball L., Lane, 1969; V. Harrison, SMNH, 1975
Delaronde L., D.S. Rawson, ROM, 1942; Liaw, 1976b
Cowan L., Liaw, 1978a
Dore L., Johnson, 1968
Lac la Plonge, Ruggles, 1959b
Keeley L., Kallemeyn, 1972a
Canoe L., Ruggles, 1959b; Kallemeyn, 1969
Utikumak L., Kallemeyn, 1972a
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Big Peter Pond L., Rawson, 1957
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Lac la Loche, Kallemeyn, 1972b
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b
Frobisher L., Rawson, 1957
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Shagwenaw L., Fernet, 1975
Elaine L., Low and Fernet, 1974a
Pinehouse L., Chen, 1973
Besnard L., Chen, 1974
McIntosh L., Koshinsky, 1971
Trout L., Koshinsky, 1971
Otter L., Rawson, 1960

Spottail shiner . . . .

Mountain L., Rawson, 1960
Drope L., Rawson, 1960
Nistowiak L., Rawson, 1960
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Pikoo L., W.K. Liaw, coll. 1983
Reeds L., W.K. Liaw, coll. 1983
Iskwatam L., Sawchyn, 1975a
Wapumon L., Sawchyn, 1975a
Sim L., Koshinsky, 1968
Amiskowan L., Rawson, 1928
Crean L., Rawson, 1928
Kingsmere L., D.S. Rawson, ROM, 1928; Rawson, 1928 (Little Trout L.)
Clare L., Rawson, 1928
Waskesiu L., D.S. Rawson, ROM, 1928; Rawson, 1928
Lac la Ronge, Rawson and Atton, 1953
Nemeiben L., Koshinsky, 1964a
East Trout L., Marshall, 1970
Nipekamew L., Marshall, 1970
Weyakwin L., Low and Fernet, 1974b
Costigan L., Dean, 1979b
Highrock L., Dean, 1980
Delta L., D. Krochak, coll. 1982 ($57^{o}16'$ $105^{o}39'$)
Russell L., Sawchyn, 1978
Wheeler R., Sawchyn, 1978

Spottail shiner . . . .

Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959; Sawchyn, 1973
Davin L., Liaw, 1976a
The Two Rivers, Sawchyn, 1975a
Steephill L., Sawchyn, 1975a
Royal L., Sawchyn, 1975a
Fafard L., Sawchyn, 1975a
Reindeer L., D.S. Rawson, ROM, 1942; Novakowski, 1955; Dean, 1975
Wathaman L., Liaw, 1976a

Arctic Basin
Low L., Willard, Sawchyn and Light, 1977
Waterloo L., Willard, Sawchyn and Light, 1977
Beaverlodge L., Swanson, 1982; Barclay, 1983
Athabasca L., Kendall, 1924; D.S. Rawson, USB, 1943; D.S. Rawson, ROM, 1943; Atton, 1971
Archibald L., Barclay and Paquin, 1981
Cantara L., Barclay and Paquin, 1981
McFarlane R., Barclay and Paquin, 1981
Ennuyeuse Cr., Bidgood, 1972
Dumville Cr., Bidgood, 1972
Cluff L., Sawchyn, 1975b
Riou L., Dean, 1978c
Cree L., D.S. Rawson, ROM, 1955; Rawson, 1959; S. Nash, NMC, 1978
Lloyd L., E.L. Dean, coll. 1981
Preston L., E.L. Dean, coll. 1981
Forrest L., E.L. Dean, coll. 1981
Patterson L., E.L. Dean, coll. 1981
Beet L., E.L. Dean, coll. 1981
Wapata L., Johnson, 1971a
Black L., Johnson, 1971a

Spottail shiner . . . .

Fond du Lac R., R.J.F. Smith, coll. 1976
Hannah L., Dean, 1978b
Hatchet L., Johnson, 1971b
Nordbye L., Dean, 1978b

Internal Basins

Fishing L., D.S. Rawson, ROM, 1938; Royer, 1961b; U.T. Hammer, coll. 1972

Sand shiner, _Notropis_ _stramineus_ (Cope)   Map 32

Qu'Appelle Basin

Souris R., F.M. Atton, ROM, 1953; W.B. and M. Scott, ROM, 1955 (as _N_. _deliciosus_); R. MacCulloch, SMNH, 1982; E.L. Dean, coll. 1983

Moose Mountain Cr., T.A. Willock, NMC, 1970; G. Pierce, coll. 1976

Qu'Appelle R., A. Halkett, NMC, 1907

Crooked L., J. Doyle, ROM, 1960; Doyle, 1961a; Atton and Johnson, 1962

Round L., Atton and Johnson, 1962

Churchill Basin

Waskesiu L., D.S. Rawson, ROM, 1928 (as _N_. _deliciosus_)

Internal Basins

Fishing L., U.T. Hammer, USB, 1971

Longnose sucker, Catostomus catostomus (Forster) Map 33

Winnipegosis Basin

Shand Cr., Larson, 1975

Saskatchewan Basin

Swiftcurrent Cr., E.L. Dean, coll. 1981

Diefenbaker L., Smith, 1974a

South Saskatchewan R., D.S. Rawson, ROM, 1941; D.S. Rawson, USB, 1941; Reed, 1957; B. Paquin, coll. 1981

North Saskatchewan R., Reed, 1957; Reed, 1962; B. Paquin, coll. 1981

Jackfish L., Atton and Novakowski, 1956; Naftel, 1965

Turtle R., ... NMC, 1962

Emma L., R.J. Mennie, NMC, 1975

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Tobin L., Royer, 1969

Cumberland L., Reed, 1959b; Royer, 1966

Namew L., Reed, 1959b

White Gull Cr., Edwards, 1966b

Scarth R., Larson, 1975 (S. fork); Larson, 1976 (N. fork)

Mossy R., Larson, 1976

Amisk L., Rawson, 1952

Deschambault L., Johnson, 1967

Mirond L., Johnson, 1967

Pelican L., Johnson, 1967

Manawan L., Schmidt, 1970

Wood L., Schmidt, 1970

Wapawekka L., Chen, 1975

Churchill Basin

Primrose L., B.L. Christensen, coll. 1978; P. McCart, coll. 1978

Longnose sucker . . . .

Cold L., R.B. Miller, coll. 1975; P. McCart, coll. 1978
Pierce L., P. McCart, coll. 1978
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Greig L., Lane, 1967b
Flotten L., C.C. Lindsey, coll. 1971
Waterhen L., Atton and Novakowski, 1956b
Cowan L., Liaw, 1978a
Lac la Plonge, Ruggles, 1956b
Dore L., Ruggles, 1959a; Johnson, 1968
Beaver R., Royer, 1972
Canoe L., Kallemeyn, 1969
Big Peter Pond L., Rawson, 1957
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Frobisher L., Rawson, 1957
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b
Keeley L., Kallemeyn, 1972a
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Pinehouse L., Chen, 1973
McIntosh L., Koshinsky, 1971
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b
Upper Foster L., Dean, 1979a
Bartlett L., Koshinsky, 1968
Trout L., Koshinsky, 1971
Otter L., Rawson, 1959a
Mountain L., Rawson, 1960
Nistowiak L., Rawson, 1959a
Drinking L., Liaw and O'Connor, 1975

Longnose sucker . . . .

Trade L., Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Iskwatam L., Sawchyn, 1975a
Pikoo L., W.K. Liaw, coll. 1983
Kingsmere L., D.S. Rawson, ROM, 1928 (Little Trout L.)
Waskesiu L., D.S. Rawson, ROM, 1928
MacLennan L., Low and Fernet, 1974c
Weyakwin L., Low and Fernet, 1974b
McKenzie Cr., Larson, 1976
Nipekamew L., Marshall, 1970
East Trout L., Marshall, 1970
Bigstone L., Mendis, 1956
Lac la Ronge, Rawson and Atton, 1953
Nemeiben L., Koshinsky, 1964a
Brabant L., Sawchyn and Kardash, 1976
Wathaman L., Liaw, 1976a
The Two Rivers, Sawchyn, 1975a
Steephill L., Sawchyn, 1975a
Royal L., Sawchyn, 1975a
Reindeer L., Novakowski, 1955; Dean, 1975
Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959; Sawchyn, 1973; S. Nash, NMC, 1978
Russell L., Sawchyn, 1978
Martin L., Sawchyn, 1978
Key L., Sawchyn, 1978
Umpherville R., F. Hunter and S. Nash, NMC, 1978

Longnose sucker . . . .

McClean L., B. Paquin, coll. 1981
Kewen L., B. Paquin, coll. 1981
Mallen L., B. Paquin, coll. 1981
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a

Arctic Basin

Fontaine L., Dean, 1978a
Low L., Willard, Sawchyn and Light, 1977
Greer L., Swanson, 1982
Fookes L., Swanson, 1982
Athabasca L., F. Harper, NMC, 1914; Kendall, 1924; D.S. Rawson, USB, 1943; D.S. Rawson, ROM, 1943; Rawson, 1947; Atton, 1971
William R., Bidgood, 1972; Barclay and Paquin, 1981
Ennuyeuse Cr., Bidgood, 1972
Dumville Cr., Bidgood, 1972
McFarlane R., Barclay and Paquin, 1981
Riou L., Dean, 1978c
Cree L., D.S. Rawson, ROM, 1955; Rawson, 1959; S. Nash, NMC, 1978
Wapata L., Johnson, 1971a
Giles L., Johnson, 1971a
Black L., Johnson, 1971a
Hatchet L., Johnson, 1971b
Hannah L., Dean, 1978b
Nordbye L., Dean, 1978b
Waterbury L., D.K. Krochak, coll. 1978
Preston L., E.L. Dean, coll. 1981
Forrest L., E.L. Dean, coll. 1981
Patterson L., E.L. Dean, coll. 1981
Beet L., E.L. Dean, coll. 1981

White sucker, Catostomus commersoni (Lacepede) Map 34

Missouri Basin

Lodge Cr., T.A. Willock, NMC, 1967; J.S. Nelson, coll. 1973

Battle Cr., P.H. Edwards, coll. 1973; T.A. Willock, NMC, 1967

Middle Cr., J.S. Nelson, coll. 1973; L. Bevan, coll. 1980

Cypress L., W.B. and M. Scott, ROM, 1955

Loch Lomond, W.B. and M. Scott, ROM, 1955

Lonepine Cr., T.A. Willock, NMC, 1967

Fairwell Cr., P.H. Edwards, coll. 1963

Frenchman R., W.B. and M. Scott, ROM, 1955; T.A. Willock, NMC, 1967; C.G. Gruchy, NMC, 1970; L. Bevan, coll. 1978

Fife L., D.E. Snell, coll. 1976

Hay Meadow Cr., T.A. Willock, NMC, 1970

Girard Cr., C. Low, coll. 1981

Poplar R., T.A. Willock, NMC, 1970; C. Low, coll. 1981

East Poplar R., D.E. Snell, coll. 1976

Qu'Appelle Basin

Qu'Appelle R., A. Halkett, NMC, 1907

Buffalo Pound L., Johnson and Koshinsky, 1961; J.K, Durbin, coll. 1981

Wascana Cr., P. McCart, coll. 1970

Pasqua L., Atton and Johnson, 1962; Johnson, 1963c; T.A. Willock, NMC, 1970

Echo L., W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c

Lebret L., Atton and Johnson, 1962

Katepwa L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Round L., Atton and Johnson, 1962

Scissors Cr., C. Dunn, coll. 1982

White sucker . . . .

Last Mountain L., Rawson, 1942; Atton and Murray, 1952; Smith, 1976
Assiniboine R., F.R. Cook, NMC, 1962
Whitesand R., R.E. Jensen, coll. 1983
Souris R., W.B. and M. Scott, ROM, 1955; L. Wallin, coll. 1975; G. Pierce, coll. 1976; E.L. Dean, coll. 1983
Long Cr., G. Pierce, coll. 1976
Boundary Dam Res., Sawchyn, Kardash and Cullimore, 1977
Moose Mountain Cr., T.A. Willock, NMC, 1970; G. Pierce, coll. 1976
Antler R., W.B. and M. Scott, ROM, 1955; C.G. Gruchy, NMC, 1970
Stevenson L., Smith, 1974b
Hewitt L., Smith, 1974b
Jabe L., Smith, 1974b
Gillis L., Royer, 1962a; Smith, 1974b
Kenosee L., Royer, 1962a; Smith, 1974b
Roughbark Cr., G. Pierce, coll. 1976

Winnipegosis Basin
Greenwater L., Royer, 1962b
Marean L., Royer, 1962b
Madge L., Rawson, 1942; Kirch, 1960
Shand Cr., Larson, 1976
Little Armit R., Larson, 1976
Kinakin Cr., Larson, 1976
Overflowing R., Larson, 1976
Fir R., Larson, 1976
Dillabough Cr., Larson, 1976
Prairie R., Larson, 1976 (E. fork)
Teepee Cr., Larson, 1976
Piwei R., Larson, 1976
Pepaw R., Larson, 1976

White sucker . . . .

Saskatchewan Basin

- Clearwater L., R.A. Ruttan, coll. 1950 ($50^{\circ}52'$ $107^{\circ}56'$)
- Diefenbaker L., Smith, 1974a
- South Saskatchewan R., Reed, 1957; B. Paquin, coll. 1981
- Swiftcurrent Cr., C.G. Gruchy, NMC, 1970; E.L. Dean, coll. 1981
- Lac Pelletier, D.S. Rawson, ROM, 1938; D.S. Rawson, USB, 1948
- North Saskatchewan R., Reed, 1962; B. Paquin, coll. 1981
- Eagle Cr., R.J.F. Smith, coll. 1980
- Jackfish L., Atton and Novakowski, 1956; Naftel, 1965; Liaw, 1978
- Murray L., D.S. Rawson, ROM, 1938; Naftel, 1965; Liaw, 1978
- Brightsand L., Rawson, 1942
- Belliveau L., D.A. Fernet, coll. 1977
- Sturgeon L., Mendis, 1956
- Turtle L., Rawson, 1942; Sawchyn, 1967a
- Little Loon L., Rawson, 1942
- Emma L., Rawson, 1942
- Christopher L., Rawson, 1942
- Round L., Rawson, 1942
- Saskatchewan R., Reed, 1962; Sawchyn, 1980
- Tobin L., Royer, 1969
- Cumberland L., Reed, 1959b; Royer, 1966
- Namew L., Reed, 1959b
- Wakaw L., Mendis, 1956
- Otosquen R., Larson, 1976
- Lost Echo L., Edwards, 1966a
- Fairy Glen L., Edwards, 1966a
- White Gull Cr., Edwards, 1966b; Larson, 1976
- Candle L., Johnson, 1963a
- Fox Cr., Larson, 1976 ($54^{\circ}16'$ $104^{\circ}28'$)

White sucker . . . .

Shannon L., Edwards, 1966a
Ispuchaw L., Edwards, 1966a
Whiteswan L., Johnson, 1962
Torch R., Edwards, 1966b
Sealey L., Edwards, 1966a
Baldy L., Edwards, 1966a
Lower Fishing L., Royer, 1964
Upper Fishing L., Royer, 1964
Limestone L., Lane, 1967a
McDougal Cr., Larson, 1976
Scarth R., Larson, 1976 (S. fork); Larson, 1976 (N. fork)
Mossy R., Larson, 1976
Little Bear L., Johnson, 1963b
Big Sandy L., Lane, 1967a
Tulabi L., Lane, 1967a
Kistapiskaw L., Lane, 1967a
Sarginson L., Lane, 1967a
Hanson L., Sawchyn, 1967b
Dupueis L., Edwards, 1966a
Johnson L., Lane, 1967a
Annabel L., Lane, 1967a
Gillingham L., Lane, 1967a
Winteringham L., Lane, 1967a
Tyrrell L., Lane, 1967a
Hamell L., Lane, 1967a
Amisk L., Rawson, 1952
Granite L., Sawchyn, 1967c
Wildnest L., Sawchyn, 1967b
Sahli L., Lowe, 1972

White sucker . . . .

Jan L., Johnson, 1967
Deschambault L., Johnson, 1967
Mirond L., Johnson, 1967
Pelican L., Johnson, 1967
Lindstrom L., Schmidt, 1970
Manawan L., Schmidt, 1970
Wood L., Schmidt, 1970
Wapawekka L., Chen, 1975

Churchill Basin
Primrose L., P. McCart, coll. 1978; B.L. Christensen, coll. 1978
Cold L., R.B. Miller, coll. 1955; W.K. Liaw, coll. 1979
Pierce L., W.K. Liaw, coll. 1979
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Lepine L., W.K. Liaw, coll. 1979
Greig L., Lane, 1967b
Waterhen L., Rawson, 1942; Atton and Novakowski, 1956b; W.K. Liaw, coll. 1979
Jeannette L., Rawson, 1942
Kimball L., Lane, 1969
Delaronde L., Liaw, 1976b
Cowan L., Liaw, 1978a
Lac la Plonge, Ruggles, 1959b
Dore L., Ruggles, 1959a; Johnson, 1968
Green L., Naftel, 1965
Beaver R., Royer, 1972
Keeley L., Kallemeyn, 1972a
Utikumak L., Kallemeyn, 1972a
Canoe L., Ruggles, 1959b; Kallemeyn, 1969

White sucker . . . .

Big Peter Pond L., Rawson, 1957; C.C. Lindsey, coll. 1971
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Frobisher L., Rawson, 1957
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b
Lac la Loche, Kallemeyn, 1972b
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972; Durbin and Fernet, 1979
Shagwenaw L., Fernet, 1975
Elaine L., Low and Fernet, 1974a
Pinehouse L., Chen, 1973
Besnard L., Chen, 1974
Waskesiu L., D.S. Rawson, ROM, 1928
MacLennan L., Low and Fernet, 1974c
Weyakwin L., Low and Fernet, 1974b
Montreal L., Mendis, 1956
Nipekamew R., Larson, 1976
Nipekamew L., Marshall, 1970
East Trout L., Marshall, 1970
Bow R., K. Roney, SMNH, 1982
Bigstone L., Mendis, 1956
Lac la Ronge, Rawson and Atton, 1953
Nemeiben L., Koshinsky, 1964a
MacKay L., Koshinsky, 1964b
Little Deer L., Koshinsky, 1964b
Lynx L., Koshinsky, 1968
Bartlett L., Koshinsky, 1968
Preview L., Koshinsky, 1968
Haugen L., Koshinsky, 1968

White sucker . . . .

Bielby L., Koshinsky, 1968
Sim L., Koshinsky, 1968
Contact L., Koshinsky, 1964b
Hebden L., Koshinsky, 1964b
Sulphide L., Koshinsky, 1964b
Davis L., Sawchyn and Kardash, 1976
Dickens L., Sawchyn and Kardash, 1976
McLennan L., Sawchyn and Kardash, 1976; S. Nash, NMC, 1978
Trout L., Koshinsky, 1971
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Nistowiak L., Rawson, 1960
Drope L., Rawson, 1960
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Iskwatam L., Sawchyn, 1975a
Wapumon L., Sawchyn, 1975a
Parks L., W.W. Sawchyn, coll. 1972
McIntosh L., Koshinsky, 1971
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b
Upper Foster L., Dean, 1979a
Davin L., Liaw, 1976a
Wathaman L., Liaw, 1976a

White sucker . . . .

Brabant L., Sawchyn and Kardash, 1976
Wierzycki L., Sawchyn and Kardash, 1976
The Two Rivers, Sawchyn, 1975a
Steephill L., Sawchyn, 1975a
Royal L., Sawchyn, 1975a
Reindeer L., Novakowski, 1955; Dean, 1975; S. Nash, NMC, 1978
Russell L., Sawchyn, 1978
Martin L., Sawchyn, 1978
Key L., Sawchyn, 1978
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a
McClean L., B. Paquin, coll. 1981
Kewen L., B. Paquin, coll. 1981
Mallen L., B. Paquin, coll. 1981
Torwalt L., B. Paquin, coll. 1981
Wheeler R., Sawchyn, 1978
Umpherville R., F. Hunter and S. Nash, NMC, 1978
Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959; Sawchyn, 1973; S. Nash, NMC, 1978

Arctic Basin

Fontaine L., Dean, 1978a
Low L., Willard, Sawchyn and Light, 1977
Beaverlodge L., Swanson, 1982; Barclay, 1983
Milliken L., Swanson, 1982; Barclay, 1983
Ace Cr., S. Swanson, coll. 1979
Athabasca L., Kendall, 1924; D.S. Rawson, USB, 1943; D.S. Rawson, ROM, 1943; Rawson, 1947; Atton and Novakowski, 1955; Atton, 1971; Barclay and Paquin, 1981
William R., Bidgood, 1972; Barclay and Paquin, 1981

White sucker . . . .

Ennuyeuse Cr., Bidgood, 1972
Dumville Cr., Bidgood, 1972
McFarlane R., Barclay and Paquin, 1981
Archibald R., Barclay and Paquin, 1981
East Archibald L., Barclay and Paquin, 1981
Riou L., Dean, 1978c
Cluff L., Sawchyn, 1975b
Douglas R., Sawchyn, 1975b
Cantara L., Barclay and Paquin, 1981
Royal L., Barclay and Paquin, 1981
Minto L., Dean, 1981
Broach L., Dean, 1981
Gedak L., Dean, 1981
Forrest L., E.L. Dean, coll. 1981
Preston L., E.L. Dean, coll. 1981
Beet L., E.L. Dean, coll. 1981
Patterson L., E.L. Dean, coll. 1981
Lloyd L., E.L. Dean, coll. 1981
Cree L., D.S. Rawson, ROM, 1955; Rawson, 1959; S. Nash, NMC, 1978
Wapata L., Johnson, 1971a
Giles L., Johnson, 1971a
Black L., Johnson, 1971a
Hatchet L., Johnson, 1971b
Hannah L., Dean, 1978b
Nordbye L., Dean, 1978b
Waterbury L., D.K. Krochak, coll. 1978

Internal Basins
Maple Cr., T.A. Willock, NMC, 1967

White sucker . . . .

Junction Res., W.B. and M. Scott, ROM, 1955
Thomson L., Royer, 1961a
Wood R., T.A. Willock, NMC, 1970
Fishing L., Royer, 1961b
Lenore L., Rawson, 1942; U.T. Hammer, USB, 1981

Mountain sucker, Catostomus platyrhynchus (Cope) Map 35

Missouri Basin

Battle Cr., R.M. Johnstone, ROM, 1927; P.H. Edwards, coll. 1963
Belanger Cr., R.M. Johnstone, ROM, 1927; B. Christensen, coll. 1983
Nine Mile Cr., J.K. Durbin, coll. 1982
Lonepine Cr., T.A. Willock, NMC, 1967; Willock, 1969

Saskatchewan Basin

Swiftcurrent Cr., F.M. Atton, ROM, 1957; Reed, 1962
Bone Cr., J.K. Durbin, coll. 1981
Battle R., Scott and Crossman, 1973

Bigmouth buffalo, Ictiobus cyprinellus (Valenciennes) Map 36

Qu'Appelle Basin

Buffalo Pound L., Gilchrist, 1888; Johnson and Koshinsky, 1961; Johnson, 1963c

Fishing L., Gilchrist, 1888 (Pasqua L.)

Pasqua L., Atton and Johnson, 1962; Johnson, 1963; C.G. Gruchy, NMC, 1970

Echo L., D.S. Rawson, ROM, 1941; W.B. Scott, ROM, 1952; F.M. Atton, ROM, 1953; Atton and Johnson, 1962; Johnson, 1963c; R.P. Johnson, NMC, 1965

Lebret L., Atton and Johnson, 1962

Katepwa L., Atton and Johnson, 1962

Crooked L., Atton and Johnson, 1962; Johnson, 1963c

Round L., Atton and Johnson, 1962

Last Mountain L., Stone, 1889; Rawson, 1942; Rawson, 1949; Atton and Murray, 1952; F.M. Atton, ROM, 1955; Johnson, 1963c; Smith, 1976

Quillback, Carpiodes cyprinus (Lesueur) Map 37

Qu'Appelle Basin

Pasqua L., Atton and Johnson, 1962; Johnson, 1963c

Echo L., Atton and Johnson, 1962; Johnson, 1963c

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Saskatchewan Basin

South Saskatchewan R., Reed, 1962; J.J. Merkowsky, coll. 1983

North Saskatchewan R., Reed, 1962

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Tobin L., Royer, 1969

Cumberland L., Sprules and Doan, 1947; Rawson, 1949; Reed, 1959b; Royer, 1966

Silver redhorse, Moxostoma anisurum (Rafinesque) Map 38

Qu'Appelle Basin
Lake of the Prairies, R.E. Jensen, coll. 1983

Winnipegosis Basin
Pepaw R., Larson, 1976

Saskatchewan Basin
South Saskatchewan R., F.M. Atton, ROM, 1953; Reed, 1962
Swiftcurrent Cr., E.B. Reed, coll. 1957
Saskatchewan R., Reed, 1962
Cumberland L., E.B. Reed, coll. 1958

Shorthead redhorse, Moxostoma macrolepidotum (Lesueur) Map 39

Missouri Basin

Belanger Cr., R.M. Johnstone, ROM, 1927

Sucker Cr., R.M. Johnstone, ROM, 1927

Frenchman R., T.A. Willock, NMC, 1967; C.G. Gruchy, NMC, 1970; L. Bevan, coll. 1978

East Poplar R., D.E. Snell, coll. 1976

Qu'Appelle Basin

Pasqua L., Atton and Johnson, 1962; Johnson, 1963

Echo L., Atton and Johnson, 1962; Johnson, 1963

Crooked L., F.M. Atton, ROM, 1960; Doyle, 1961a; Atton and Johnson, 1962

Round L., Atton and Johnson, 1962

Lake of the Prairies, R.E. Jensen, coll. 1983

Winnipegosis Basin

Piwei R., Larson, 1976

Saskatchewan Basin

Swiftcurrent Cr., C.G. Gruchy, NMC, 1970

South Saskatchewan R., D.S. Rawson, USB, 1941; D.S. Rawson, ROM, 1941; Rawson, 1949; R.E. Jensen, coll. 1982

Diefenbaker L., Smith, 1974a

CPR Tunnel, R.P. Johnson, ROM, 1959 (interbasin diversion to Qu'Appelle Basin)

North Saskatchewan R., F.M. Atton, ROM, 1954; Reed, 1962; B. Paquin, coll. 1981

Battle R., E.B. Reed, coll. 1957

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Shorthead redhorse . . . .

Cumberland L., Rawson, 1949; Reed, 1959b; Royer, 1966
Namew L., Reed, 1959b
Deschambault L., Johnson, 1967

Churchill Basin
Trout L., Koshinsky, 1971
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Nistowiak L., Rawson, 1960
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Drope L., Rawson, 1960
Keg L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Wapumon L., Sawchyn, 1975a
Iskwatam L., Sawchyn, 1975a
The Two Rivers, Sawchyn, 1975a
Pikoo L., W.K. Liaw, coll. 1983
Reeds L., W.K. Liaw, coll. 1983

Black bullhead, Ictalurus melas (Rafinesque) Map 40

Qu'Appelle Basin

Souris R., P.H. Edwards, ROM, 1956; R. MacCulloch, SMNH, 1982; G. Saluski, coll. 1982; E.L. Dean, coll. 1983

Boundary Res., Sawchyn, Kardash and Cullimore, 1977

Pasqua L., R.P. Johnson, ROM, 1956; Atton and Johnson, 1962; Johnson, 1963c

Echo L., Johnson, 1963c

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Brown bullhead, Ictalurus nebulosus (Lesueur) Map 41

Qu'Appelle Basin

Souris R., P.H. Edwards, ROM, 1956; L. Wallin, coll. 1975

Whitesand R., P.H. Edwards, ROM, 1954

Channel catfish, *Ictalurus punctatus* (Rafinesque) Map 42

Qu'Appelle Basin
Qu'Appelle R., L. Brown, coll. 1983

Saskatchewan Basin
Cumberland L., Richardson, 1836 (Pine Island L.)

Missouri Basin
Frenchman R., Stegner, 1955; Willock, 1969

Stonecat, *Noturus flavus* Rafinesque

Map 43

Missouri Basin

Frenchman R., C.G. Gruchy, NMC, 1970; Royer and Anderson, 1977; L. Bevan, coll. 1978

Conglomerate Cr., J.K. Durbin, coll. 1982

Tadpole madtom, Noturus gyrinus (Mitchill) Map 44

Qu'Appelle Basin

Souris R., P.H. Edwards, ROM, 1956; J.K. Frederickson, ROM, 1956; R. MacCulloch, SMNH, 1982; E.L. Dean, coll. 1983

Trout-perch, Percopsis omiscomaycus (Walbaum) Map 45

Qu'Appelle Basin

Souris R., F.M. Atton, ROM, 1953; W.B. and M. Scott, ROM, 1955; L. Wallin, coll. 1975; E.L. Dean, coll. 1983

Moose Mountain Cr., G. Pierce, coll. 1976

Qu'Appelle R., A. Halkett, NMC, 1907

Pasqua L., Atton and Johnson, 1962; Johnson, 1963c; T.A. Willock, NMC, 1970

Echo L., A. Halkett, NMC, 1907; Atton and Johnson, 1962; Johnson, 1963c

Lebret L., Atton and Johnson, 1962

Katepwa L., R.P. Johnson, ROM, 1955; Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Round L., Atton and Johnson, 1962

Last Mountain L., Atton and Murray, 1952; U.T. Hammer, USB, 1971

Good Spirit L., D.S. Rawson, ROM, 1938

Winnipegosis Basin

Greenwater L., D.S. Rawson, ROM, 1938; Royer, 1962b

Marean L., Royer, 1962b

Saskatchewan Basin

Jumping Pound Cr., D.S. Rawson, ROM, 1938 (N. of North Battleford)

Swiftcurrent Cr., C.G. Gruchy, NMC, 1970

South Saskatchewan R., R.E. Jensen, coll. 1982

Diefenbaker L., Smith, 1974c

Saskatchewan R., Reed, 1962

Cumberland L., Reed, 1959b; Royer, 1966

Namew L., Reed, 1959b

Candle L., Johnson, 1963a

Hanin Cr., R. Orr, coll. 1982

Trout-perch . . . .

White Gull Cr., P.H. Edwards, ROM, 1959; Edwards, 1966b
Lower Fishing L., Royer, 1964
Hanson L., Sawchyn, 1967b
Amisk L., D.S. Rawson, ROM, 1951; Rawson, 1952
Big Sandy L., Lane, 1967a
Wildnest L., Sawchyn, 1967b
Jan L., Johnson, 1967
Deschambault L., Johnson, 1967
Pelican L., Johnson, 1967
Mirond L., Johnson, 1967
Lindstrom L., Schmidt, 1970
Manawan L., Schmidt, 1970
Wood L., Schmidt, 1970
Wapawekka L., Chen, 1975

Churchill Basin
Cold L., P. McCart, coll. 1978
Pierce L., P. McCart, coll. 1978; W.K. Liaw, coll. 1979
Canoe L., Kallemeyn, 1969
Dore L., Ruggles, 1959a
Big Peter Pond L., Rawson, 1957
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Churchill L., Kallemeyn, 1973a
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b
Lac la Loche, Kallemeyn, 1972b
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Shagwenaw L., Fernet, 1975

Trout-perch . . . .

Pinehouse L., Chen, 1973
Besnard L., Chen, 1974
McIntosh L., Koshinsky, 1971
Waskesiu L., D.S. Rawson, ROM, 1928
Weyakwin L., Low and Fernet, 1974b
East Trout L., Marshall, 1970
Lac la Ronge, Rawson and Atton, 1953; W.H. Van Vliet, NMC, 1964
Nemeiben L., Koshinsky, 1964a
Haugen L., Koshinsky, 1968
Sim L., Koshinsky, 1968
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Drope L., Rawson, 1960
Nistowiak L., Rawson, 1960
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Wapumon L., Sawchyn, 1975a
Iskwatam L., Sawchyn, 1975a
Wintego L., Sawchyn, 1975a
Reeds L., W.K. Liaw, coll. 1983
The Two Rivers, Sawchyn, 1975a
Steephill L., Sawchyn, 1975a
Royal L., Sawchyn, 1975a
Fafard L., Sawchyn, 1975a
Reindeer L., Novakowski, 1955; Dean, 1975
Russell L., Sawchyn, 1978
Wathaman L., Liaw, 1976a

Trout-perch . . . .

Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959; Sawchyn, 1973
Dawn Cr., D. Troubridge, coll. 1983 (58°18' 103°58')

Arctic Basin

Low L., Willard, Sawchyn and Light, 1977
Milliken L., Swanson, 1982; Barclay, 1983
Athabasca L., D.S. Rawson, ROM, 1943; Atton, 1971
Dumville Cr., Bidgood, 1972
Cantara L., Barclay and Paquin, 1981
East Archibald L., Barclay and Paquin, 1981
McFarlane R., Barclay and Paquin, 1981
Riou L., Dean, 1978c
Cluff L., Sawchyn, 1975b
Forrest L., E.L. Dean, coll. 1981
Preston L., E.L. Dean, coll. 1981
Beet L., E.L. Dean, coll. 1981
Cree L., D.S. Rawson, ROM, 1955; Rawson, 1959
Wapata L., Johnson, 1971a
Black L., Johnson, 1971a
Hatchet L., Johnson, 1971b
Fond du Lac R., R.J.F. Smith, coll. 1976

Burbot, Lota lota (Linnaeus) Map 46

Missouri Basin

Frenchman R., L. Bevan, coll. 1978

Qu'Appelle Basin

Buffalo Pound L., Gilchrist, 1888; Johnson and Koshinsky, 1961

Fishing L., Gilchrist, 1888 (Pasqua L.)

Pasqua L., W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c

Echo L., D.S. Rawson, ROM, 1938; W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c

Lebret L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Katepwa L., Atton and Johnson, 1962

Crooked L., J. Doyle, ROM, 1960; Doyle, 1961a; Atton and Johnson, 1962

Round L., Atton and Johnson, 1962

Last Mountain L., Rawson, 1942; Rawson, 1949; Atton and Murray, 1952; Smith, 1976

Good Spirit L., D.S. Rawson, ROM, 1938 (Devil's L.)

Winnipegosis Basin

Overflowing R., Larson, 1976

Greenwater L., Royer, 1962b

Marean L., Royer, 1962b

Saskatchewan Basin

Swiftcurrent Cr., E.L. Dean, coll. 1981

Diefenbaker L., Smith, 1974a

South Saskatchewan R., Reed, 1957

Blackstrap Res., L.M. Royer, coll. 1972; R.J.F. Smith, coll. 1979

Burbot . . . .

North Saskatchewan R., Reed, 1957; B. Paquin, coll. 1981

Jackfish L., D.S. Rawson, ROM, 1938; Atton and Novakowski, 1956; Naftel, 1965; Liaw, 1978

Sturgeon L., Mendis, 1956

Turtle L., Sawchyn, 1967a

Emma L., U.T. Hammer, coll. 1969

Wakaw L., Mendis, 1956

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Tobin L., Royer, 1969

Cumberland L., Reed, 1959b; Royer, 1966

Namew L., Reed, 1959b

White Gull Cr., Edwards, 1966b

Candle L., Johnson, 1963a

Fox Cr., Larson, 1976 (54°16' 104°28')

Torch R., Edwards, 1966b

Little Sandy L., Johnson, 1962

Lower Fishing L., Royer, 1964

Limestone L., Lane, 1967a

McDougal Cr., Larson, 1976

Mossy R., Larson, 1976

Little Bear L., Johnson, 1963b

Tulabi L., Lane, 1967a

Kistapiskaw L., Lane, 1967a

Winteringham L., Lane, 1967a

Amisk L., Rawson, 1952

Granite L., Sawchyn, 1967c

Wildnest L., Sawchyn, 1967b

Sahli L., Lowe, 1972

Jan L., Johnson, 1967

Burbot . . . .

Deschambault L., Johnson, 1967
Mirond L., Johnson, 1967
Pelican L., Johnson, 1967
Lindstrom L., Schmidt, 1970
Manawan L., Schmidt, 1970
Wood L., Schmidt, 1970

Churchill Basin
Primrose L., B.L. Christensen, coll. 1978; P. McCart, coll. 1978
Cold L., R.B. Miller, coll. 1955; P. McCart, coll. 1978
Pierce L., P. McCart, coll. 1978
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Greig L., Lane, 1967b
Waterhen L., Atton and Novakowski, 1956b; W.K. Liaw, coll. 1979
Delaronde L., Liaw, 1976b
Tie L., Liaw, 1975
Dore L., Ruggles, 1959a; Johnson, 1968
Green L., Naftel, 1965
Lac la Plonge, Ruggles, 1959b
Beaver R., Royer, 1972
Keeley L., Kallemeyn, 1972a
Utikumak L., Kallemeyn, 1972a
Canoe L., Ruggles, 1959b; Kallemeyn, 1969
Big Peter Pond L., Rawson, 1957
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Frobisher L., Rawson, 1957
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b

Burbot . . . .

Lac la Loche, Kallemeyn, 1972b
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Shagwenaw L., Fernet, 1975
Elaine L., Low and Fernet, 1974a
Pinehouse L., Chen, 1973
Waskesiu L., D.S. Rawson, ROM, 1928
Kingsmere L., Rawson, 1928
Halkett L., D.S. Rawson, ROM, 1930 (Sandy L.)
MacLennan L., Low and Fernet, 1974c
Weyakwin L., Low and Fernet, 1974b
Montreal L., Mendis, 1956
Nipekamew L., Marshall, 1970
East Trout L., Marshall, 1970
Bigstone L., Mendis, 1956
Lac la Ronge, Rawson and Atton, 1953; W.H. Van Vliet, NMC, 1964
Nemeiben L., Koshinsky, 1964a
MacKay L., Koshinsky, 1964b
Little Deer L., Koshinsky, 1964b
Lynx L., Koshinsky, 1968
Bartlett L., Koshinsky, 1968
Hebden L., Koshinsky, 1964b
Davis L., Sawchyn and Kardash, 1976
Dickens L., Sawchyn and Kardash, 1976
McLennan L., Sawchyn and Kardash, 1976
Trout L., Koshinsky, 1971
Otter L., Rawson, 1959a
Drope L., Rawson, 1960
Drinking L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975

Burbot . . . .

Keg L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Iskwatam L., Sawchyn, 1975a
Wapumon L., Sawchyn, 1975a
Parks L., W.W. Sawchyn, coll. 1972
McIntosh L., Koshinsky, 1971
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b
Upper Foster L., Dean, 1979a
Davin L., Liaw, 1976a
Wathaman L., Liaw, 1976a
Brabant L., Sawchyn and Kardash, 1976
Wierzycki L., Sawchyn and Kardash, 1976
The Two Rivers, Sawchyn, 1975a
Steephill L., Sawchyn, 1975a
Royal L., Sawchyn, 1975a
Fafard L., Sawchyn, 1975a
Reindeer L., Novakowski, 1955; Dean, 1975
Mallen L., B. Paquin, coll. 1981
Russell L., Sawchyn, 1978
Martin L., Sawchyn, 1978
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a
Wollaston L., Rawson, 1959; Sawchyn, 1973

Kazan Basin
Patterson L., F.M. Atton, coll. 1975

Burbot . . . .

Arctic Basin

Fontaine L., Dean, 1978a

Beaverlodge L., Swanson, 1982; Barclay, 1983

Milliken L., Swanson, 1982; Barclay, 1983

Fulton L., S. Swanson, coll. 1979

Athabasca L., D.S. Rawson, ROM, 1943; Rawson, 1947; Atton and Novakowski, 1955; Atton, 1971

William R., Bidgood, 1972; Barclay and Paquin, 1981

Ennuyeuse Cr., Bidgood, 1972

Dumville Cr., Bidgood, 1972

McFarlane R., Barclay and Paquin, 1981

Riou L., Dean, 1978c

Cluff L., Sawchyn, 1975b

Douglas R., Sawchyn, 1975b

Minto L., Dean, 1981

Murison L., Dean, 1981

Broach L., Dean, 1981

Gedak L., Dean, 1981

Harrison L., Dean, 1981

Forrest L., E.L. Dean, coll. 1981

Preston L., E.L. Dean, coll. 1981

Beet L., E.L. Dean, coll. 1981

Patterson L., E.L. Dean, coll. 1981

Lloyd L., E.L. Dean, coll. 1981

Cree L., Rawson, 1959

Wapata L., Johnson, 1971a

Giles L., Johnson, 1971a

Black L., Johnson, 1970

Hatchet L., Johnson, 1971b

Burbot . . . .

Hannah L., Dean, 1978b
Nordbye L., Dean, 1978b
Fond du Lac R., R.J.F. Smith, coll. 1976

Brook stickleback, Culaea inconstans (Kirtland) Map 47

Missouri Basin

Lodge Cr., T.A. Willock, NMC, 1967; J.S. Nelson, coll. 1973

Battle Cr., T.A. Willock, NMC, 1967

Middle Cr., J.S. Nelson, coll. 1973; L. Bevan, coll. 1980

Frenchman R., T.A. Willock, NMC, 1970; L. Bevan, coll. 1978

Loch Lomond, D.S. Rawson, ROM, 1938; W.B. and M. Scott, ROM, 1955

Loch Leven, H. Sutherland, SMNH, 1975

Lonepine Cr., W.B. and M. Scott, ROM, 1955; T.A. Willock, NMC, 1967; Willock, 1969

Calf Cr., J.K. Durbin, coll. 1981

Cypress L., W.B. and M. Scott, ROM, 1955

Fife L., D.E. Snell, coll. 1976; J.K. Durbin, coll. 1981

Girard Cr., C. Low, coll. 1981; R. MacCulloch, SMNH, 1982

Bolster Cr., C. Low, coll. 1981

Poplar R., C. Low, coll. 1981

East Poplar R., D.E. Snell, coll. 1976; C. Low, coll. 1981

.... Cr., R. MacCulloch, SMNH, 1982 (Hwy. 18 at Big Beaver)

Qu'Appelle Basin

Moose Jaw Cr., F.R. Cook, NMC, 1961; A.H. Clarke, Jr., NMC, 1962

Aiktow Cr., F.M. Atton, ROM, 1959

Buffalo Pound L., Johnson and Koshinsky, 1961

Qu'Appelle R., R. MacCulloch, SMNH, 1981

Pasqua L., Atton and Johnson, 1962; T.A. Willock, NMC, 1970; Johnson, 1963c

Echo L., Atton and Johnson, 1962; Johnson, 1963c

Lebret L., Atton and Johnson, 1962

Katepwa L., Atton and Johnson, 1962

Crooked L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Brook stickleback . . . .

Round L., Atton and Johnson, 1962
Scissors Cr., C. Dunn, coll. 1982
Last Mountain L., D.S. Rawson, ROM, 1938; Smith, 1976
.... Cr., R. MacCulloch, SMNH, 1981 (Hwy. 10 W. of Yorkton)
Loverin L., F.M. Atton, ROM, 1953
Souris R., F.M. Atton, ROM, 1953; R. MacCulloch, SMNH, 1982
Nickle L., R. Kreba, SMNH, 1969
Rinfret Cr., R. MacCulloch, SMNH, 1981
Pipestone Cr., R. Hooper, SMNH, 1976
Roughbark Cr., R. MacCulloch, SMNH, 1981
Long Cr., G. Pierce, coll. 1976
Boundary Dam Res., Sawchyn, Kardash and Cullimore, 1977
Moose Mountain Cr., T.A. Willock, NMC, 1970
Antler R., C.G. Gruchy, NMC, 1970
Gillis L., Royer, 1962a; Smith, 1974b
Cannington L., Royer, 1962a; Smith, 1974b
Kenosee L., Royer, 1962a
White Bear L., D.S. Rawson, ROM, 1938 (Carlyle L.); Smith, 1974b
Clearwater L., Smith, 1974b
Sandy L., Smith, 1974b
Hassard L., Smith, 1974b
Good Spirit L., D.S. Rawson, ROM, 1938 (Devil's L.)
Whitesand R., R.E. Jensen, coll. 1983
Lake of the Prairies, R.E. Jensen, coll. 1983

Winnipegosis Basin
Greenwater L., Royer, 1962b
Marean L., Royer, 1962b
Ruby L., G. Clouthier, coll. 1982

Brook stickleback . . . .

Shand Cr., Larson, 1976
Little Armit R., Larson, 1976
Prairie R., Larson, 1976 (E. fork)
Teepee Cr., Larson, 1976
Overflowing R., Larson, 1975

Saskatchewan Basin
Swiftcurrent Cr., R. MacCulloch, SMNH, 1981
Bone Cr., J.K. Durbin, coll. 1981
Blackstrap Res., R.J.F. Smith, coll. 1979
Pike L., R.J.F. Smith, coll. 1973
Moon L., R.J.F. Smith, coll. 1975
Beaver Cr., R.J.F. Smith, coll. 1972
North Saskatchewan R., Reed, 1962
Turtle L., Sawchyn, 1967a
Belliveau L., D.A. Fernet, coll. 1977 (53°30' 109°15')
Eagle Cr., F.M. Atton, coll. 1982
Opuntia L., U.T. Hammer, USB, 1971
Saskatchewan R., Reed, 1962
Tobin L., Royer, 1969
Cumberland L., Royer, 1966
Namew L., Reed, 1959b
Connell Cr., J.K. Durbin, coll. 1981
Otosquen R., Larson, 1976
Wakaw L., Mendis, 1956; U.T. Hammer, USB, 1971, 1981
Whiteswan L., Johnson, 1962; Nelson and Atton, 1971
Piprell L., Johnson, 1961; Nelson and Atton, 1971
Ranger L., L. Wallin, coll. 1981

Brook stickleback . . . .

Hanin Cr., R.P. Johnson, coll. 1977
Icehouse Cr., R.P. Johnson, coll. 1977 (on Candle L.)
Birchbark Cr., R.P. Johnson, 1977
Fox Cr., Larson, 1976 ($54^{0}16'$ $104^{0}28'$)
White Gull R., Larson, 1976
Fern Cr., Larson, 1975
Zeden L., J.K. Durbin, coll. 1982
Scarth R., Larson, 1976 (S. fork); Larson, 1976 (N. fork)
McDougal Cr., Larson, 1976
Bull Moose Cr., Larson, 1976 ($54^{0}10'$ $104^{0}09'$)
Mossy R., Larson, 1976
Amisk L., D.S. Rawson, ROM, 1951; Rawson, 1952
Nesootao L., Lane, 1967 (west lake)
Big Sandy L., Lane, 1967a
Hanson L., Sawchyn, 1967b
Jan L., Johnson, 1967
Deschambault L., Johnson, 1967
Pelican L., Johnson, 1967
Black L., Lane, 1967a
Unser L., Lane, 1967a

Churchill Basin

Primrose L., B.L. Christensen, coll. 1978; P. McCart, coll. 1978
Cold L., P. McCart, coll. 1978
Cold R., W.K. Liaw, coll. 1979
Pierce L., W.K. Liaw, coll. 1979
Lac des Iles, Lane, 1967b
Greig L., Lane, 1967b
Little Amyot L., Royer, 1972

Brook stickleback . . . .

Waterhen L., Atton and Novakowski, 1956b
Delaronde L., D.S. Rawson, ROM, 1942; Liaw, 1976b
Dore L., Johnson, 1968
Lac la Plonge, L. Kratt, coll. 1979
.... Cr., R.J. Mennie, NMC, 1975 (54°23' 109°40')
Vivian L., V. Harrison, SMNH, 1975; Nelson and Atton, 1971
Big Peter Pond L., Rawson, 1957
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Churchill L., Rawson, 1957
Turnor L., Kallemeyn, 1973b
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Shagwenaw L., Fernet, 1975
Massinahigan R., L. Kratt, coll. 1979
Twoforks R., I. Sutherland, NMC, 1978; J. Madill, NMC, 1978
Waskesiu L., D.S. Rawson, ROM, 1928
Kingsmere L., D.S. Rawson, ROM, 1928 (Little Trout L.); Rawson, 1928
Crean L., Rawson, 1928
Shady L., Rawson, 1928
MacLennan R., R.J. Mennie, NMC, 1975
.... L., L. Wallin, coll. 1980 (54°45' 105°40')
Lac la Ronge, Rawson and Atton, 1953
Nemeiben L., Koshinsky, 1964a
Nipekamew R., Larson, 1976 (headwaters)
Bow R., K. Roney, SMNH, 1982
Besnard L., Chen, 1974
Trout L., Koshinsky, 1971
Mountain L., Rawson, 1960
Drinking L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975

Brook stickleback . . . .

Iskwatam L., Sawchyn, 1975a
Wintego L., Sawchyn, 1975a
Wapumon L., Sawchyn, 1975a
Pikoo L., W.K. Liaw, coll. 1983
Reeds L., W.K. Liaw, coll. 1983

Arctic Basin
Athabasca L., Atton, 1971
Ennuyeuse Cr., Bidgood, 1972

Internal Basins
Maple Cr., T.A. Willock, NMC, 1967
Junction Res., W.B. and M. Scott, ROM, 1955
.... Cr., F.R. Cook, NMC, 1961 ($49^{o}55'$ $109^{o}29'$)
.... Cr., F.R. Cook, NMC, 1961 (SW of Crane L.)
Wood R., T.A. Willock, NMC, 1970; R. MacCulloch, SMNH, 1981
Russell Cr., J.K. Durbin, coll. 1982
Notukeu Cr., R. MacCulloch, SMNH, 1981; D. Lucyshyn, coll. 1982
Cadillac Cr., R. MacCulloch, SMNH, 1981
Thompson L., Royer, 1961a
Twelve Mile L., U.T. Hammer, USB, 1971
Chaplin Cr., R. MacCulloch, SMNH, 1981
Old Wives L., U.T. Hammer, USB, 1971
Fishing L., Royer, 1961b
Lenore L., D.S. Rawson, ROM, 1938; U.T. Hammer, USB, 1981
Humboldt L., U.T. Hammer, USB, 1971, 1981
Redberry L., U.T. Hammer, USB, 1971
.... Cr., F.R. Cook, NMC, 1959 (N. of Cabri)
Eyehill Cr., A.H. Clarke, NMC, 1965
Manito L., D.S. Rawson, ROM, 1938 (near Yonker)

Ninespine stickleback, Pungitius pungitius (Linnaeus) Map 48

Qu'Appelle Basin

Buffalo Pound L., Johnson and Koshinsky, 1961; J.K. Durbin, coll. 1981

Qu'Appelle R., A. Halkett, NMC, 1907; R. MacCulloch, SMNH, 1981

Pasqua L., D.S. Rawson, ROM, 1938; Atton and Johnson, 1962; Johnson, 1963c; T.A. Willock, NMC, 1970

Echo L., A. Halkett, NMC, 1907; D.S. Rawson, ROM, 1941; W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c

Lebret L., Atton and Johnson, 1962

Katepwa L., Atton and Johnson, 1962

Crooked L., Doyle, 1961a; Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Round L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Last Mountain L., D.S. Rawson, ROM, 1938; Atton and Murray, 1952; Smith, 1976

Winnipegosis Basin

Greenwater L., Royer, 1962b

Marean L., Royer, 1962b

Pepaw R., Larson, 1976

Saskatchewan Basin

Clearwater L., D.S. Rawson, ROM, 1938; R.A. Ruttan, coll. 1950 (50°52' 107°56')

Jackfish L., Atton and Novakowski, 1956; Naftel, 1965

Cumberland L., Reed, 1959b

Namew L., Reed, 1959b

Candle L., Johnson, 1963a

Amisk L., D.S. Rawson, ROM, 1951; Rawson, 1952

Big Sandy L., Lane, 1967a

Ninespine stickleback . . . .

Little Bear L., Johnson, 1963b
Wildnest L., Sawchyn, 1967b
Sahli L., Lowe, 1972
Jan L., Johnson, 1967
Deschambault L., Johnson, 1967
Pelican L., Johnson, 1967
Mirond L., Johnson, 1967
Lindstrom L., Schmidt, 1970
Manawan L., Schmidt, 1970
Wood L., Schmidt, 1970
Wapawekka L., Chen, 1975

Churchill Basin
Primrose L., B.L. Christensen, coll. 1978
Cold L., W.K. Liaw, coll. 1979
Cold R., W.K. Liaw, coll. 1979
Pierce L., W.K. Liaw, coll. 1979
Lac des Iles, D.S. Rawson, ROM, 1953; Atton and Novakowski, 1956a; Lane, 1967b
Lepine L., W.K. Liaw, coll. 1979
Greig L., Lane, 1967b
Waterhen L., Atton and Novakowski, 1956b
Delaronde L., Liaw, 1976b
Dore L., Johnson, 1968
Lac la Plonge, Ruggles, 1959b
Canoe L., Ruggles, 1959b; Kallemeyn, 1969
Keeley L., Kallemeyn, 1972a
Big Peter Pond L., Rawson, 1957
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a

Ninespine stickleback . . . .

Churchill L., Rawson, 1957
Frobisher L., Rawson, 1957
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b
Lac la Loche, Kallemeyn, 1972b
Lac Ile-a-la-Crosse, D.S. Rawson, ROM, 1954; Rawson, 1957; Saylor, 1972
Shagwenaw L., Fernet, 1975
Pinehouse L., Chen, 1973
Besnard L., Chen, 1974
McIntosh L., Koshinsky, 1971
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b
Upper Foster L., Dean, 1979a
Waskesiu L., D.S. Rawson, ROM, 1928
Kingsmere L., D.S. Rawson, ROM, 1928; Rawson, 1928
Crean L., Rawson, 1928
Clare L., Rawson, 1928
Lac la Ronge, Rawson and Atton, 1953; W.H. Van Vliet, NMC, 1964
Nemeiben L., Koshinsky, 1964a
Bartlett L., Koshinsky, 1968
Mountain L., Rawson, 1960
Drinking L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Wapumon L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Pikoo L., W.K. Liaw, coll. 1983
Davin L., Liaw, 1976a
Wathaman L., Liaw, 1976a

Ninespine stickleback . . . .

Steephill L., Sawchyn, 1975a

Royal L., Sawchyn, 1975a

Fafard L., Sawchyn, 1975a

Reindeer L., D.S. Rawson, ROM, 1942; N.S. Novakowski, ROM, 1954; Novakowski, 1955; Dean, 1975

Wheeler R., Sawchyn, 1978

Russell L., Sawchyn, 1978

Costigan L., Dean, 1979b

Highrock L., Dean, 1980a

Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959; Sawchyn, 1973; D. Waite, coll. 1983

Dawn Cr., D. Troubridge, coll. 1983 (58°18' 103°58')

Kazan Basin

Patterson L., F.M. Atton, coll. 1975

Arctic Basin

Ena L., Barclay and Whiting, 1981

Fontaine L., Dean, 1978a

Beaverlodge L., Swanson, 1982; Barclay, 1983

Low L., Willard, Sawchyn and Light, 1977

Milliken L., Swanson, 1982; Barclay, 1983

Fulton L., S. Swanson, coll. 1979

Athabasca L., Kendall, 1924; D.S. Rawson, ROM, 1943; Atton, 1971; Barclay and Paquin, 1981

Gunnar Mine Pit, Tones, 1982

William R., Bidgood, 1972; Barclay and Paquin, 1981

Dumville Cr., Bidgood, 1972

Archibald R., Barclay and Paquin, 1981

Ninespine stickleback . . . .

Royal L., Barclay and Paquin, 1981
McFarlane R., Barclay and Paquin, 1981
Riou L., Dean, 1978c
Cluff L., Sawchyn, 1975b
Minto L., Dean, 1981
Murison L., Dean, 1981
Broach L., Dean, 1981
Harbo L., Dean, 1981
Hodge L., Dean, 1981
Harrison L., Dean, 1981
Forrest L., E.L. Dean, coll. 1981
Preston L., E.L. Dean, coll. 1981
Beet L., E.L. Dean, coll. 1981
Patterson L., E.L. Dean, coll. 1981
Lloyd L., E.L. Dean, coll. 1981
Cree L., D.S. Rawson, ROM, 1955; Rawson, 1959
Wapata L., Johnson, 1971a
Giles L., Johnson, 1971a
Black L., Johnson, 1971a
Hatchet L., Johnson, 1971b
Hannah L., Dean, 1978b
Nordbye L., Dean, 1978b
Fond du Lac R., R.J.F. Smith, coll. 1976

Internal Basins
Manito L., Bajkov, 1927
Redberry L., D.S. Rawson, USB, 1938
Deadmoose L., U.T. Hammer, coll. 1981

Ninespine stickleback . . . .

Basin L., P.I. Tones, USB, 1972
Lenore L., U.T. Hammer, coll. 1971, 1981
Little Quill L., ... ROM, 1920; D.S. Rawson, ROM, 1938
Fishing L., Royer, 1961b; U.T. Hammer, USB, 1971

Rock bass, *Ambloplites rupestris* (Rafinesque) Map 49

Qu'Appelle Basin

Round L., F.M. Atton, ROM, 1957; Atton and Johnson, 1962

Crooked L., Doyle, 1961a; Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Lake of the Prairies, R.E. Jensen, coll. 1983

Yellow perch, Perca flavescens (Mitchill) Map 50

Missouri Basin

Loch Leven, Ruttan, 1951

Frenchman R., W.B. and M. Scott, ROM, 1955; T.A. Willock, NMC, 1967; C.G. Gruchy, NMC, 1970; L. Bevan, coll. 1978

Willows Res., Ruttan, 1951

Qu'Appelle Basin

Brokenshell Cr., Ruttan, 1951

Buffalo Pound L., Gilchrist, 1888; Johnson and Koshinsky, 1961

Fishing L., Gilchrist, 1888 (Pasqua L.)

Qu'Appelle R., A. Halkett, NMC, 1907; Doyle, 1961

Pasqua L., Atton and Johnson, 1962; Johnson, 1963c

Echo L., D.S. Rawson, ROM, 1941; W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c

Lebret L., Atton and Johnson, 1962

Katepwa L., Atton and Johnson, 1962

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Round L., Atton and Johnson, 1962

Last Mountain L., Rawson, 1942; Atton and Murray, 1952; C.C. Lindsey, coll. 1971

Crystal L., J.R. Marchinko, coll. 1948

Nelson L., R.E. Jensen, coll. 1983

Lake of the Prairies, R.E. Jensen, coll. 1983

Souris R., W.B. and M. Scott, ROM, 1955; R. MacCulloch, SMNH, 1982; E.L. Dean, coll. 1983

Kenosee L., Royer, 1962a; Smith, 1974b

Cannington L., Royer, 1962a; Smith, 1974b

Moose Mountain Cr., G. Pierce, coll. 1976

Roughbark Cr., G. Pierce, coll. 1976

Gillis L., Royer, 1962a; Smith, 1974b

Yellow perch . . . .

White Bear L., Smith, 1974b
Long Cr., G. Pierce, coll. 1976
Boundary Dam Res., Sawchyn, Kardash and Cullimore, 1977

Winnipegosis Basin
Madge L., Rawson, 1942; Kirch, 1960
Overflowing R., Larson, 1976
Pepaw R., Larson, 1976
Greenwater L., Royer, 1962b
Marean L., Royer, 1962b

Saskatchewan Basin
Lac Pelletier, P.C. Naftel, coll. 1982
Swiftcurrent Cr., E.L. Dean, coll. 1981
Diefenbaker L., Smith, 1974a
Clearwater L., R.A. Ruttan, coll. 1950
Murray L., Naftel, 1965; Liaw, 1978
Jackfish L., Atton and Novakowski, 1956; Naftel, 1965; Liaw, 1978
Sturgeon L., Mendis, 1956
Turtle L., Rawson, 1942; Sawchyn, 1967a
Brightsand L., Rawson, 1942
Round L., Rawson, 1942
Emma L., Rawson, 1942; U.T. Hammer, coll. 1969; R.J. Mennie, NMC, 1975
Christopher L., Rawson, 1942
Wakaw L., Mendis, 1956; U.T. Hammer, USB, 1971, 1981
Saskatchewan R., Reed, 1962; Sawchyn, 1980
Tobin L., Royer, 1969

Yellow perch . . . .

Cumberland L., Reed, 1959b; Royer, 1966
Namew L., Reed, 1959b
Candle L., Johnson, 1963a; R.P. Johnson, coll. 1977
Little Sandy L., Johnson, 1962
Lost Echo L., Edwards, 1966a
Ispuchaw L., Edwards, 1966a
Fairy Glen L., Edwards, 1966a
Shannon L., Edwards, 1966a
Zeden L., Edwards, 1966a
Sealey L., Edwards, 1966a
Lower Fishing L., Royer, 1964
Upper Fishing L., Royer, 1964
Baldy L., Edwards, 1966a
McDougal Cr., Larson, 1976
Dupueis L., Edwards, 1966a
Little Bear L., Johnson, 1963b
Limestone L., Lane, 1967a
Big Sandy L., Lane, 1967a
Nesootao L., Lane, 1967a
Sarginson L., Lane, 1967a
Johnson L., Lane, 1967a
Annabel L., Lane, 1967a
Gillingham L., Lane, 1967a
Tyrrell L., Lane, 1967a
Hamell L., Lane, 1967a
Tulabi L., Lane, 1967a
Winteringham L., Lane, 1967a
Granite L., Sawchyn, 1967c
Hanson L., Sawchyn, 1967b

Yellow perch . . . .

Wildnest L., Sawchyn, 1967b
Suggi L., D.W. Anderson, coll. 1965
Amisk L., D.S. Rawson, ROM, 1951; Rawson, 1952
Sahli L., Lowe, 1972
Deschambault L., Johnson, 1967
Jan L., Johnson, 1967
Pelican L., Johnson, 1967
Mirond L., Johnson, 1967
Lindstrom L., Schmidt, 1970
Manawan L., Schmidt, 1970
Wood L., Schmidt, 1970
Wapawekka L., Chen, 1975

Churchill Basin
Primrose L., B.L. Christensen, coll. 1978
Cold L., P. McCart, coll. 1978; W.K. Liaw, coll. 1979
Cold R., W.K. Liaw, coll. 1979
Pierce L., W.K. Liaw, coll. 1979
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Lepine L., W.K. Liaw, coll. 1979
Makwa L., Rawson, 1942
Jeannette L., Rawson, 1942
Greig L., Lane, 1967b
Kimball L., Lane, 1969; V. Harrison, SMNH, 1975
Matheson L., R.J. Mennie, NMC, 1975
Waterhen L., Rawson, 1942; Atton and Novakowski, 1956b; W.K. Liaw, coll. 1979
Cowan L., Liaw, 1978a
Delaronde L., Liaw, 1976b

Yellow perch . . . .

Tie L., Liaw, 1975
Beaver R., Royer, 1972
Dore L., Ruggles, 1959a; Johnson, 1968
Canoe L., Ruggles, 1959b; Kallemeyn, 1969
Keeley L., Kallemeyn, 1972a
Utikumak L., Kallemeyn, 1972a
Big Peter Pond L., Rawson, 1957
Little Peter Pond L., Rawson, 1957
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Frobisher L., Rawson, 1957
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b
Lac la Loche, Kallemeyn, 1972b
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Shagwenaw L., Fernet, 1975
Elaine L., Low and Fernet, 1974a
Pinehouse L., Chen, 1973
Besnard L., Chen, 1974
MacLennan L., Low and Fernet, 1974c
MacLennan R., R.J. Mennie, NMC, 1975
Waskesiu L., D.S. Rawson, ROM, 1928
Kingsmere L., D.S. Rawson, ROM, 1928 (Little Trout L.)
Montreal L., Mendis, 1956
Bigstone L., Mendis, 1956
Nemeiben L., Koshinsky, 1964a
Little Deer L., Koshinsky, 1964b; R.J. Mennie, NMC, 1975
Lynx L., Koshinsky, 1968
MacKay L., R.J. Mennie, NMC, 1975
East Trout L., Marshall, 1970

Yellow perch . . . .

Nipekamew L., Marshall, 1970
Downton L., Atton, 1949 (eradicated)
Lac la Ronge, Rawson and Atton, 1953
Preview L., Koshinsky, 1968
Haugen L., Koshinsky, 1968
Sim L., Koshinsky, 1968
Bielby L., Koshinsky, 1968
Contact L., Koshinsky, 1964b
Hebden L., Koshinsky, 1964b
Trout L., Koshinsky, 1971
McIntosh L., Koshinsky, 1971
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Drope L., Rawson, 1960
Nistowiak L., Rawson, 1960
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Iskwatam L., Sawchyn, 1975a
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Pikoo L., W.K. Liaw, coll. 1983
Dickens L., Sawchyn and Kardash, 1976
Brabant L., Sawchyn and Kardash, 1976
Wierzycki L., Sawchyn and Kardash, 1976
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b

Yellow perch . . . .

Upper Foster L., Dean, 1979a
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a
Martin L., Sawchyn, 1978
Russell L., Sawchyn, 1978
Wheeler R., Sawchyn, 1978
Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959
The Two Rivers, Sawchyn, 1975a
Steephill L., Sawchyn, 1975a
Royal L., Sawchyn, 1975a
Fafard L., Sawchyn, 1975a
Davin L., Liaw, 1976a
Wathaman L., Liaw, 1976a
Reindeer L., D.S. Rawson, ROM, 1942; Novakowski, 1955; Dean, 1975

Arctic Basin
Low L., Willard, Sawchyn and Light, 1977
Athabasca L., D.S. Rawson, USB, 1943
Cantara L., Barclay and Paquin, 1981
Royal L., Barclay and Paquin, 1981
Cluff L., Sawchyn, 1975b
Broach L., Dean, 1981
Gedak L., Dean, 1981
Minto L., Dean, 1981
Lloyd L., Dean, coll. 1981
Forrest L., Dean, coll. 1981
Preston L., Dean, coll. 1981
Beet L., Dean, coll. 1981

Yellow perch . . . .

Cree L., D.S. Rawson, ROM, 1955; Rawson, 1959
Wapata L., Johnson, 1971a
Black L., Johnson, 1971a
Hatchet L., Johnson, 1971b

Internal Basins
Fishing L., Royer, 1961b; U.T. Hammer, USB, 1971

Walleye, *Stizostedion vitreum* (Mitchill) Map 51

Missouri Basin

- Frenchman R., L. Bevan, coll. 1978
- East Poplar R., D.E. Snell, coll. 1976
- Cookson Res., W.W. Sawchyn, coll. 1980
- Fife L., D.E. Snell, coll. 1976; W.W. Sawchyn, coll. 1980

Qu'Appelle Basin

- Buffalo Pound L., Gilchrist, 1888; F.M. Atton, ROM, 1959; Johnson and Koshinsky, 1961
- Fishing L., Gilchrist, 1888 (Pasqua L.)
- Qu'Appelle R., A. Halkett, NMC, 1907
- Pasqua L., Atton and Johnson, 1962; Johnson, 1963 c
- Echo L., D.S. Rawson, ROM, 1928; W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962; Johnson, 1963c
- Lebret L., Atton and Johnson, 1962
- Katepwa L., Atton and Johnson, 1962
- Crooked L., Doyle, 1961a; Atton and Johnson, 1962
- Round L., Atton and Johnson, 1962
- Last Mountain L., Rawson, 1942; Rawson, 1949; Atton and Murray, 1952; Smith, 1976
- Crystal L., J.R. Marchinko, coll. 1948
- Souris R., L. Wallin, coll. 1975
- Kenosee L., Royer, 1962a; Smith, 1974b
- Cannington L., Royer, 1962a; Smith, 1974b
- White Bear L., Smith, 1974b
- Boundary Dam Res., Sawchyn, Kardash and Cullimore, 1977
- Good Spirit L., D.S. Rawson, ROM, 1938 (Devil's L.)

Walleye . . . .

Winnipegosis Basin
  Madge L., Rawson, 1942; Kirch, 1960
  Greenwater L., D.S. Rawson, ROM, 1938; Royer, 1962b
  Marean L., Royer, 1962b

Saskatchewan Basin
  South Saskatchewan R., Reed, 1957; B. Paquin, coll. 1981
  Diefenbaker L., Smith, 1974a
  Swift Current Cr., E.L. Dean, coll. 1981
  Blackstrap Res., L.M. Royer, coll. 1972
  North Saskatchewan R., Reed, 1962; B. Paquin, coll. 1981
  Murray L., Naftel, 1965; Liaw, 1978
  Jackfish L., Atton and Novakowski, 1956; Naftel, 1965; Liaw, 1978
  Sturgeon L., Mendis, 1956
  Turtle L., Rawson, 1942; Sawchyn, 1967a
  Round L., Rawson, 1942
  Emma L., Rawson, 1942; U.T. Hammer, coll. 1969
  Christopher L., Rawson, 1942
  Wakaw L., Mendis, 1956
  Saskatchewan R., Reed, 1962; Sawchyn, 1980
  Tobin L., Royer, 1969
  Cumberland L., Reed, 1962; Royer, 1966
  Namew L., Reed, 1959b
  Candle L., Johnson, 1963a
  Torch R., Edwards, 1966b
  Torch L., R.P. Johnson, coll. 1977
  Lower Fishing L., Royer, 1964
  Little Bear L., Johnson, 1963b
  Puskwakau R., Johnson, 1969

Walleye . . . .

Big Sandy L., Lane, 1967a
Hamell L., Lane, 1967a
Tulabi L., Lane, 1967a
Kistapiskaw L., Lane, 1967a
Limestone L., Lane, 1967a
Sarginson L., Lane, 1967a
Granite L., Sawchyn, 1967c
Hanson L., Sawchyn, 1967b
Wildnest L., Sawchyn, 1967b
Suggi L., D.W. Anderson, coll. 1965
Deschambault L., Johnson, 1967
Jan L., Johnson, 1967
Pelican L., Johnson, 1967
Mirond L., Johnson, 1967
Lindstrom L., Schmidt, 1970
Manawan L., Schmidt, 1970
Wood L., Schmidt, 1970
Wapawekka L., Chen, 1975
Amisk L., Rawson, 1952

Churchill Basin
Primrose L., B.L. Christensen, coll. 1978; P. McCart, coll. 1978
Cold L., R.B. Miller, coll. 1955; P. McCart, coll. 1978
Pierce L., P. McCart, coll. 1978
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Greig L., Lane, 1967b
Kimball L., Lane, 1969
Waterhen L., Rawson, 1942; Atton and Novakowski, 1956b

Walleye . . . .

Flotten L., C.C. Lindsey, coll. 1971
Makwa L., Rawson, 1942
Little Loon L., Rawson, 1942
Green L., Naftel, 1965
Cowan L., Liaw, 1978a
Delaronde L., Liaw, 1976b
Tie L., Liaw, 1975
Hackett L., Liaw, 1976c
Beaver R., Royer, 1972
Dore L., Ruggles, 1959a; Johnson, 1968
Canoe L., Ruggles, 1959b; Kallemeyn, 1969
Keeley L., Kallemeyn, 1972a
Utikumak L., Kallemeyn, 1972a
Big Peter Pond L., Rawson, 1957
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Frobisher L., Rawson, 1957
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b
Lac la Loche, Kallemeyn, 1972b
Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972
Shagwenaw L., Fernet, 1975
Besnard L., Chen, 1974
Elaine L., Low and Fernet, 1974a
Pinehouse L., Chen, 1973
Waskesiu L., D.S. Rawson, ROM, 1928
Montreal L., Mendis, 1956
Weyakwin L., Low and Fernet, 1974b
Bigstone L., Mendis, 1956

Walleye . . . .

Nemeiben L., Koshinsky, 1964a
Little Deer L., Koshinsky, 1964b
Sulphide L., Koshinsky, 1964b
Contact L., Koshinsky, 1964b
Bartlett L., Koshinsky, 1968
Sim L., Koshinsky, 1968
East Trout L., Marshall, 1970
Nipekamew L., Marshall, 1970
Lac la Ronge, Rawson and Atton, 1953
Black Bear Island L., N. Ferrier, coll. 1950
McIntosh L., Koshinsky, 1971
Trout L., Koshinsky, 1971
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Drope L., Rawson, 1960
Nistowiak L., Rawson, 1960
Iskwatikan L., N. Ferrier, coll. 1949
Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Wapumon L., Sawchyn, 1975a
Iskwatam L., Sawchyn, 1975a
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Pikoo L., W.K. Liaw, coll. 1983
Highrock L., Dean, 1980a
Martin L., Sawchyn, 1978

Walleye . . . .

- Russell L., Sawchyn, 1978
- Wheeler R., Sawchyn, 1978
- Key L., Sawchyn, 1978
- Kewen L., B. Paquin, coll. 1981
- McClean L., B. Paquin, coll. 1981
- Torwalt L., B. Paquin, coll. 1981
- Umpherville R., F. Hunter and S. Nash, NMC, 1978
- Wollaston L., Sawchyn, 1973
- The Two Rivers, Sawchyn, 1975a
- Steephill L., Sawchyn, 1975a
- Royal L., Sawchyn, 1975a
- Fafard L., Sawchyn, 1975a
- Davin L., Liaw, 1976a
- Wathaman L., Liaw, 1976a
- Reindeer L., Novakowski, 1955; Dean, 1975

Arctic Basin

- Athabasca L., Preble, 1908; Kendall, 1924; Rawson, 1947; Atton and Novakowski, 1955; Atton, 1971
- Sandy L., Tones, 1979
- Cantara L., Barclay and Paquin, 1981
- Broach L., Dean, 1981
- Lloyd L., E.L. Dean, coll. 1981
- Patterson L., E.L. Dean, coll. 1981
- Forrest L., E.L. Dean, coll. 1981
- Preston L., E.L. Dean, coll. 1981
- Beet L., E.L. Dean, coll. 1981
- Careen L., F.M. Atton, coll. 1954
- Ubiquity L., D. McLeod, coll. 1981

Walleye . . . .

Cree L., D.S. Rawson, ROM, 1955; Rawson, 1959
Giles L., Johnson, 1971a
Wapata L., Johnson, 1971a
Black L., Johnson, 1971a
Riou L., Dean, 1978c
Hatchet L., Johnson, 1971b
Nordbye L., Dean, 1978b

Internal Basins
Fishing L., Royer, 1961b
Redberry L., Rawson, 1942 (introduced)

Sauger, Stizostedion canadense (Smith) Map 52

Qu'Appelle Basin

Buffalo Pound L., R.P. Johnson, ROM, 1959; Johnson and Koshinsky, 1961

Aiktow Cr., F.M. Atton, ROM, 1959

Qu'Appelle R., A. Halkett, NMC, 1907

Pasqua L., T.A. Willock, NMC, 1970

Saskatchewan Basin

South Saskatchewan R., D.S. Rawson, ROM, 1941; Rawson, 1949; B. Paquin, coll. 1981

Diefenbaker L., Smith, 1974a

North Saskatchewan R., B. Paquin, coll. 1981

Saskatchewan R., Reed, 1962; Sawchyn, 1980

Tobin L., Royer, 1969

Cumberland L., Rawson, 1949; Reed, 1959b; Royer, 1966

Namew L., Reed, 1959b

Manawan L., Schmidt, 1970

Churchill Basin

Beaver R., Royer, 1972

Little Peter Pond L., Kallemeyn, 1973a

Churchill L., Kallemeyn, 1973a

Shagwenaw L., Fernet, 1975

Pinehouse L., Chen, 1973

Trout L., Koshinsky, 1971

Otter L., Rawson, 1960

Mountain L., Rawson, 1960

Drope L., Rawson, 1960

Nistowiak L., Rawson, 1960

Sauger . . . .

Drinking L., Rawson, 1960; Liaw and O'Connor, 1975
Keg L., Liaw and O'Connor, 1975
Trade L., Liaw and O'Connor, 1975
Ourom L., Liaw and O'Connor, 1975
Uskik L., Liaw and O'Connor, 1975
Wapumon L., Sawchyn, 1975a
Iskwatam L., Sawchyn, 1975a
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
The Two Rivers, Sawchyn, 1975a
Steephill L., Sawchyn, 1975a
Royal L., Sawchyn, 1975a

Logperch, Percina caprodes (Rafinesque) Map 53

Saskatchewan Basin

Cumberland L., Royer, 1966
Namew L., Reed, 1959b
Candle L., Johnson, 1963a
Torch R., Edwards, 1966b
Lost Echo L., Edwards, 1966a
Lower Fishing L., Royer, 1964
Upper Fishing L., Royer, 1964
Amisk L., D.S. Rawson, ROM, 1951; Rawson, 1952
Wildnest L., Sawchyn, 1967b
Jan L., Johnson, 1967
Deschambault L., Johnson, 1967
Pelican L., Johnson, 1967
Lindstrom L., Schmidt, 1970
Manawan L., Schmidt, 1970
Wood L., Schmidt, 1970
Wapawekka L., Chen, 1975

Churchill Basin

Cold L., P. McCart, coll. 1978; W.K. Liaw, coll. 1979
Cold R., W.K. Liaw, coll. 1979
Pierce L., P. McCart, coll. 1978; W.K. Liaw, coll. 1979
Lac des Iles, Atton and Novakowski, 1956a; Lane, 1967b
Lepine L., W.K. Liaw, coll. 1979
Waterhen R., W.K. Liaw, coll. 1979
Canoe L., C.P. Ruggles, ROM, 1958; Ruggles, 1959b; Kallemeyn, 1969
Little Peter Pond L., Rawson, 1957; Kallemeyn, 1973a
Churchill L., Rawson, 1957; Kallemeyn, 1973a
Turnor L., Kallemeyn, 1973b

Logperch . . . .

Wasekamio L., Kallemeyn, 1973b

Delaronde L., D.S. Rawson, ROM, 1942; Rawson and Moore, 1944; Rawson, 1949; Liaw, 1976b

Dore L., Johnson, 1968

Lac Ile-a-la-Crosse, Rawson, 1957; Saylor, 1972

Shagwenaw L., Fernet, 1975

Pinehouse L., Chen, 1973

Besnard L., Chen, 1974

McIntosh L., Koshinsky, 1971

Pechey L., Koshinsky, 1968

Trout L., Koshinsky, 1971

Drinking L., Liaw and O'Connor, 1975

Trade L., Liaw and O'Connor, 1975

Keg L., Liaw and O'Connor, 1975

Ourom L., Liaw and O'Connor, 1975

Uskik L., Liaw and O'Connor, 1975

Pita L., Sawchyn, 1975a

Reeds L., W.K. Liaw, coll. 1983

The Two Rivers, Sawchyn, 1975a

Steephill L., Sawchyn, 1975a

Royal L., Sawchyn, 1975a

Blackside darter, Percina maculata (Girard) Map 54

Qu'Appelle Basin

Souris R., W.B. and M. Scott, ROM, 1955; E.L. Dean, coll. 1983
Moose Mountain Cr., G. Pierce, coll. 1976
Crooked L., Doyle, 1961a; Atton and Johnson, 1962
Assiniboine R., F.R. Cook, NMC, 1962
Whitesand R., R.E. Jensen, coll. 1983

Johnny darter, Etheostoma nigrum (Rafinesque) Map 55

Qu'Appelle Basin

Souris R., F.M. Atton, ROM, 1953; W.B. and M. Scott, ROM, 1955; E.L. Dean, coll. 1983

Moose Mountain Cr., G. Pierce, coll. 1976

Boundary Res., Sawchyn, Kardash and Cullimore, 1977

Scissors Cr., C. Dunn, coll. 1982

Round L., Atton and Johnson, 1982; R. MacCulloch and W. Russon, SMNH, 1981

Crooked L., Doyle, 1961; Atton and Johnson, 1962

Qu'Appelle R., Eigenmann and Eigenmann, 1892; A. Halkett, NMC, 1907

Katepwa L., J.E. Moore, ROM, 1941; Atton and Johnson, 1962

Lebret L., Atton and Johnson, 1962

Echo L., D.S. Rawson, ROM, 1941; W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962

Pasqua L., D.S. Rawson, ROM, 1938; W.B. and M. Scott, ROM, 1955; Atton and Johnson, 1962

Loverin L., F.M. Atton, ROM, 1953

Last Mountain L., Smith, 1976

Assiniboine R., F.R. Cook, NMC, 1962

Whitesand R., D. Sakal, coll. 1982; R.E. Jensen, coll. 1983

Lake of the Prairies, R.E. Jensen, coll. 1983

Winnipegosis Basin

Swan R., M.R. Salzl, coll. 1982

Madge L., Kirch, 1960; B. Sherstobitoff, coll. 1982

Marean L., Royer, 1962b

Greenwater L., Royer, 1962b

Little Armit R., Larson, 1976

Pepaw R., M.R. Salzl, coll. 1982

Prairie R., Larson, 1976 (E. fork)

Johnny darter . . . .

Fir R., Larson, 1976
Dillabough Cr., Larson, 1976
Piwei R., Larson, 1976
Shand Cr., Larson, 1976
Kinakin Cr., Larson, 1976

Saskatchewan Basin
Connell Cr., J.K. Durbin, coll. 1981
Saskatchewan Delta, Royer, 1966
Namew L., Reed, 1959
Candle L., Johnson, 1963a; R.P. Johnson, coll. 1977
White Gull Cr., Edwards, 1966
Fox Cr., Larson, 1976 (54°16' 104°28')
Lower Fishing L., Royer, 1964
Upper Fishing L., Royer, 1964
McDougal Cr., Larson, 1976
Scarth R., Larson, 1975 (S. fork); Larson, 1976 (N. fork)
Amisk L., D.S. Rawson, ROM, 1951; Rawson, 1952
Little Bear L., Johnson, 1963b
Big Sandy L., Lane, 1967
Jan L., Johnson, 1967
Pelican L., Johnson, 1967
Deschambault L., Johnson, 1967
Wood L., Schmidt, 1970
Manawan L., Schmidt, 1970
Lindstrom L., Schmidt, 1970
Wapawekka L., Chen, 1975

Johnny darter . . . .

Churchill Basin

- Lac des Iles, Lane, 1967b
- Elaine L., Low and Fernet, 1974a
- Pinehouse L., Chen, 1973
- Weyakwin L., Low and Fernet, 1974b
- McIntosh L., Koshinsky, 1971
- Ourom L., Liaw and O'Connor, 1975
- Wintego L., Sawchyn, 1975a
- Pita L., Sawchyn, 1975a
- Pikoo L., W.K. Liaw, coll. 1983
- The Two Rivers, Sawchyn, 1975a
- Steephill L., Sawchyn, 1975a
- Royal L., Sawchyn, 1975a
- Fafard L., Sawchyn, 1975a
- Reindeer L., Dean, 1975

Iowa darter, _Etheostoma_ _exile_ (Girard) Map 56

Missouri Basin

Lodge Cr., T.A. Willock, NMC, 1967; J.S. Nelson, coll. 1973

Middle Cr., J.S. Nelson, coll. 1973; L. Bevan, coll. 1980

Battle Cr., T.A. Willock, NMC, 1967

Loch Lomond, D.S. Rawson, ROM, 1938; W.B. and M. Scott, ROM, 1955

Loch Leven, H. Sutherland, SMNH, 1975

Lonepine Cr., W.B. and M. Scott, ROM, 1955; T.A. Willock, NMC, 1967

Cypress L., W.B. and M. Scott, ROM, 1955; P.H. Edwards, ROM, 1955

Frenchman R., L. Bevan, coll. 1978

Fife L., D.E. Snell, coll. 1976; J.K. Durbin, coll. 1981

Girard Cr., C. Low, coll. 1981

Poplar R., T.A. Willock, NMC, 1970; C. Low, coll. 1981

East Poplar R., D.E. Snell, coll. 1976; C. Low, coll. 1981

Qu'Appelle Basin

Aiktow Cr., F.M. Atton, ROM, 1958, 1959; R.P. Johnson, ROM, 1959

Buffalo Pound L., Johnson and Koshinsky, 1961

Last Mountain L., Atton and Murray, 1952; Smith, 1976

Qu'Appelle R., Eigenmann and Eigenmann, 1892; A. Halkett, NMC, 1907; Doyle, 1961; R. MacCulloch and W. Russon, SMNH, 1981

Pasqua L., D.S. Rawson, ROM, 1938; J.E. Moore, ROM, 1941; Atton and Johnson, 1962; Johnson, 1963c; T.A. Willock, NMC, 1970

Echo L., Atton and Johnson, 1962; Johnson, 1963c; R. MacCulloch and W. Russon, SMNH, 1981

Lebret L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Katepwa L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Crooked L., Doyle, 1961a; Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Iowa darter . . . .

Round L., Atton and Johnson, 1962; R. MacCulloch and W. Russon, SMNH, 1981

Souris R., R. MacCulloch, SMNH, 1981

Antler R., W.B. and M. Scott, ROM, 1955

Rinfret Br., R. MacCulloch, SMNH, 1981

Pipestone Cr., R. Hooper, SMNH, 1976

Cannington L., Royer, 1962a; Smith, 1974b

Moose Mountain Cr., T.A. Willock, NMC, 1970

Whitesand R., R.E. Jensen, coll. 1983

Winnipegosis Basin

Madge L., Kirch, 1960

Dillabough Cr., Larson, 1976

Pepaw R., Larson, 1976

Greenwater L., Royer, 1962b

Marean L., Royer, 1962b

Saskatchewan Basin

Swiftcurrent Cr., Eigenmann and Eigenmann, 1892; F.M. Atton, ROM, 1953; C.G. Gruchy, NMC, 1970; R. MacCulloch, SMNH, 1981

Beaver Cr., R.J.F. Smith, coll. 1979

Turtle L., Sawchyn, 1967a; R.J. Mennie, NMC, 1975

Jackfish L., Atton and Novakowski, 1956; Naftel, 1965

Murray L., D.S. Rawson, ROM, 1938

Wakaw L., Mendis, 1956; U.T. Hammer, USB, 1981

Sturgeon L., Mendis, 1956

Emma L., E. Moore, ROM, 1939

Candle L., Johnson, 1963a

Hanin Cr., R. Orr, coll. 1982

Iowa darter . . . .

Whiteswan L., Johnson, 1962
Lower Fishing L., Royer, 1964
Fairy Glen L., Edwards, 1966a
Ispuchaw L., Edwards, 1966a
Sealey L., Edwards, 1966a
Baldy L., Edwards, 1966a
Shannon L., Edwards, 1966a
Zeden L., Edwards, 1966a; J.K. Durbin, coll. 1982
Little Bear L., Johnson, 1963b
Amisk L., Rawson, 1952
Deschambault L., Johnson, 1967
Pelican L., Johnson, 1967
Manawan L., Schmidt, 1970
Wapawekka L., Chen, 1975

Churchill Basin
Primrose L., B.L. Christensen, coll. 1978
Cold L., P. McCart, coll. 1978; W.K. Liaw, coll. 1979
Pierce L., P. McCart, coll. 1978; W.K. Liaw, coll. 1979
Lac des Iles, D.S. Rawson, ROM, 1955; Atton and Novakowski, 1956a
Lepine L., W.K. Liaw, coll. 1979
Waterhen L., D.S. Rawson, ROM, 1955; Atton and Novakowski, 1956b
Delaronde L., Liaw, 1976b
Cowan L., Liaw, 1978a
Dore L., Johnson, 1968
Keeley L., Kallemeyn, 1972a
Utikumak L., Kallemeyn, 1972a
Canoe L., Kallemeyn, 1969

Iowa darter . . . .

Little Peter Pond L., D.S. Rawson, ROM, 1952; Rawson, 1957

Churchill L., D.S. Rawson, ROM, 1952; Rawson, 1957

Lac la Loche, Kallemeyn, 1972b

Turnor L., Kallemeyn, 1973b

Lac Ile-a-la-Crosse, D.S. Rawson, ROM, 1954; Rawson, 1957; Saylor, 1972

Shagwenaw L., Fernet, 1975

Twoforks R., J. Madill, NMC, 1978

Waskesiu L., D.S. Rawson, ROM, 1928

Kingsmere L., D.S. Rawson, ROM, 1928 (Little Trout L.); Rawson, 1928

Crean L., Rawson, 1928

Clare L., Rawson, 1928

.... L., L. Wallin, coll. 1980 ($54^{0}45'$ $105^{0}40'$)

Lac la Ronge, Rawson and Atton, 1953; W.H. Van Vliet, NMC, 1964

Preview L., Koshinsky, 1968

Trout L., Koshinsky, 1971

Mountain L., Rawson, 1960

Drinking L., Liaw and O'Connor, 1975

Trade L., Liaw and O'Connor, 1975

Keg L., Liaw and O'Connor, 1975

Ourom L., Liaw and O'Connor, 1975

Uskik L., Liaw and O'Connor, 1975

Wapumon L., Sawchyn, 1975a

Iskwatam L., Sawchyn, 1975a

Wintego L., Sawchyn, 1975a

Pita L., Sawchyn, 1975a

Pikoo L., W.K. Liaw, coll. 1983

Reeds L., W.K. Liaw, coll. 1983

Davin L., Liaw, 1976a

Wathaman L., Liaw, 1976a

Iowa darter . . . .

Internal Basins

Junction Res. W.B. and M. Scott, ROM, 1955

Fishing L., Royer, 1961b

Lenore L., D.S. Rawson, ROM, 1938; U.T. Hammer, coll. 1981

Slimy sculpin, Cottus cognatus *Richardson* Map 57

Winnipegosis Basin
  Little Armit R., Larson, 1976
  Teepee Cr., Larson, 1976

Saskatchewan Basin
  South Saskatchewan R., R.E. Jensen, coll. 1982
  Jackfish L., Naftel, 1965
  Amisk L., D.S. Rawson, ROM, 1951; Rawson, 1952
  Candle L., R.P. Johnson, coll. 1977
  White Gull Cr., Edwards, 1966b; Larson, 1976
  Little Bear L., Johnson, 1963b
  Ispuchaw L., Edwards, 1966a
  Hanson L., Sawchyn, 1967b
  Wildnest L., Sawchyn, 1967b
  Deschambault L., Johnson, 1967
  Jan L., Johnson, 1967
  Pelican L., Johnson, 1967
  Mirond L., Johnson, 1967
  Wood L., Schmidt, 1970
  Wapawekka L., Chen, 1975

Churchill Basin
  Primrose L., B.L. Christensen, coll. 1978
  Cold L., P. McCart, coll. 1978; W.K. Liaw, coll. 1979
  Pierce L., W.K. Liaw, coll. 1979
  Delaronde L., Liaw, 1976b
  Big Peter Pond L., D.S. Rawson, ROM, 1952; Rawson, 1957
  Little Peter Pond L., D.S. Rawson, ROM, 1952; Rawson, 1957; Kallemeyn, 1973a

Slimy sculpin . . . .

Churchill L., D.S. Rawson, ROM, 1952; Rawson, 1957; Kallemeyn, 1973a
Turnor L., Kallemeyn, 1973b
Wasekamio L., Kallemeyn, 1973b
Lac Ile-a-la-Crosse, D.S. Rawson, ROM, 1954; Rawson, 1957
Besnard L., Chen, 1974
Waskesiu L., D.S. Rawson, ROM, 1928
Weyakwin L., R.J. Mennie, NMC, 1975
McKenzie Cr., F.M. Atton, coll. 1954
Bow R., K. Roney, SMNH, 1982
East Trout L., Marshall, 1970
Lac la Ronge, Rawson and Atton, 1953; W.H. Van Vliet, NMC, 1964
Nemeiben L., Koshinsky, 1964a
Lynx L., Koshinsky, 1968
Rapid R., Schmidt, Meyer and Sawchyn, 1978
Bielby L., Koshinsky, 1968
Bartlett L., Koshinsky, 1968
McIntosh L., Koshinsky, 1971
Trout L., Koshinsky, 1971
Otter L., Rawson, 1960
Mountain L., Rawson, 1960
Drope L., Rawson, 1960
Nistowiak L., Rawson. 1960
Drinking L., Rawson, 1960
Iskwatam L., Sawchyn, 1975a
Wintego L., Sawchyn, 1975a
Pita L., Sawchyn, 1975a
Reeds L., W.K. Liaw, coll. 1983
Lower Foster L., Dean, 1980b
Middle Foster L., Dean, 1980b

Slimy sculpin . . . .

Upper Foster L., Dean, 1979a
Key L., Sawchyn, 1978
Russell L., Sawchyn, 1978
Wheeler R., Sawchyn, 1978
Costigan L., Dean, 1979b
Highrock L., Dean, 1980a
Collins Cr., D. Troubridge, coll. 1983
Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959; Sawchyn, 1973
Davin L., Liaw, 1976a
Wathaman L., Liaw, 1976a
Steephill L., Sawchyn, 1975a
Royal L., Sawchyn, 1975a
Fafard L., Sawchyn, 1975a
Reindeer L., N.S. Novakowski, ROM, 1954; Novakowski, 1955; Dean, 1975

Kazan Basin

Patterson L., F.M. Atton, coll 1975

Arctic Basin

Ena L., Barclay and Whiting, 1981
Beaverlodge L., Swanson, 1982; Barclay, 1983
Milliken L., Swanson, 1982; Barclay, 1983
Athabasca L., F. Harper, NMC, 1914; Kendall, 1924; D.S. Rawson, USB, 1943; D.S. Rawson, ROM, 1943; Atton, 1971; Barclay and Paquin, 1981
Archibald R., Barclay and Paquin, 1981
McFarlane R., Barclay and Paquin, 1981
Cluff L., Sawchyn, 1975b
Broach L., Dean, 1981

Slimy sculpin . . . .

Harbo L., Dean, 1981
Harrison L., Dean, 1981
Hodge L., Dean, 1981
Murison L., Dean, 1981
Patterson L., E.L. Dean, coll. 1981
Lloyd L., E.L. Dean, coll. 1981
Forrest L., E.L. Dean, coll. 1981
Preston L., E.L. Dean, coll. 1981
Beet L., E.L. Dean, coll. 1981
Cree L., D.S. Rawson, ROM, 1955; Rawson, 1959
Black L., F. Harper, NMC, 1914; Johnson, 1971a
Fond du Lac R., R.J.F. Smith, coll. 1975
Riou L., Dean, 1978c
Hatchet L., Johnson, 1971b
Nordbye L., Dean, 1978b

Spoonhead sculpin, _Cottus ricei_ (Nelson) Map 58

Qu'Appelle Basin
  Buffalo Pound L., Johnson and Koshinsky, 1961

Saskatchewan Basin
  Diefenbaker L., Smith, 1974c
  South Saskatchewan R., R.P. Johnson, ROM, 1959
  Saskatchewan R., Reed, 1962; Sawchyn, 1980
  Cumberland L., Reed, 1959b
  Tearing R., F.M. Atton, ROM, 1952
  Wapawekka L., Chen, 1975

Churchill Basin
  Lac la Plonge, Ruggles, 1959b
  Pinehouse L., Chen, 1973
  Besnard L., Chen, 1974
  Trade L., W.K. Liaw, coll. 1974
  Reindeer L., Dean, 1975
  Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959

Arctic Basin
  Athabasca L., D.S. Rawson, USB, 1943; D.S. Rawson, ROM, 1943
  Hatchet L., Johnson, 1971b

Deepwater sculpin, Myoxocephalus quadricornis (Linnaeus) Map 59

Saskatchewan Basin

Mirond L., Johnson, 1967

Churchill Basin

Lac la Plonge, C.P. Ruggles, ROM, 1957; Ruggles, 1959b

Lac la Ronge, Rawson and Atton, 1953; D.S. Rawson, ROM, 1957; J. Brown, NMC, 1966

Reindeer L., N.S. Novakowski, ROM, 1954; Novakowski, 1955; Dean, 1975

Wollaston L., D.S. Rawson, ROM, 1956; Rawson, 1959

Arctic Basin

Beaverlodge L., Swanson, 1982; Barclay, 1983

Milliken L., Swanson, 1982; Barclay, 1983

Riou L., Dean, 1978c

Black L., Johnson, 1971a

Hatchet L., Johnson, 1971b

American eel, Anguilla rostrata (Lesueur) Map 60

Saskatchewan Basin

Lac Pelletier, R.P. Johnson, introduced, 1953

All subsequent records result from the migration attempts of these fish.

Swiftcurrent Cr., F.M. Atton, coll. 1961; E.L. Dean, coll. 1981

South Saskatchewan R., F.M. Atton, coll. 1960 (Saskatoon); Radford, 1972

Rainbow trout, *Salmo gairdneri* (Jordan) Map 61

Missouri Basin
Battle Cr., N. Ferrier, coll. 1949; P.H. Edwards, coll. 1963
East Poplar R., D.E. Snell, coll. 1976
Fairwell Cr., P.H. Edwards, coll. 1963
Conglomerate Cr.)
Loch Leven)
Nine Mile Cr.)

Qu'Appelle Basin)
White Bear Res.) Listed as stocked trout waters, 1981

Winnipegosis Basin)
Armit Borrow Pit)

Saskatchewan Basin
Swiftcurrent Cr., E.L. Dean, coll. 1981
Piprell L., Johnson, 1961
Scarth R., Larson, 1976 (S. fork); Larson, 1976 (N. fork)
Mossy R., Larson, 1976
Nistum L.)
Cleland L.)
Lorraine L.)
Bergren Cr.)
Cora L.) Listed as stocked trout waters, 1981
Jade L.)
Kit L.)
Konuto L.)

Rainbow trout	
Mackie L.	Listed as stocked trout waters, 1981
Maistre L.	
Sealey L.	
Shannon L.	
Zeden L.	
Churchill Basin	
Beatty L.	
Camp 10 L.	
East Naniskak L.	
Feldspar L.	
Five Fingers L.	
Meeyomoot R.	
Mekewap L.	
Shirley L.	
Singh L.	
West L.	
Atchison L.	
Poplar Ridge L.	
Terra L.	
Vivian L.	
Arctic Basin	
Johnston L.	
Internal Basins	
Suffern L.	
Yonker L.	
Ingebright Res.	

Brown trout, *Salmo trutta* Linnaeus

Map 62

Missouri Basin
  - Belanger Cr.
  - Conglomerate Cr.
  - Frenchman R.
  - Sucker Cr.
  - Calf Cr.

Saskatchewan Basin
  - Bone Cr.
  - Swiftcurrent Cr.
  - Reid L.

Listed as stocked trout waters, 1981

  - Fox Cr., Larson, 1976 (approx. 54°16' 104°28')

Brook trout, Salvelinus fontinalis (Mitchill) Map 63

Missouri Basin

Calf Cr., J. Durbin, coll. 1981
Concrete Cr., J. Durbin, coll. 1981
Belanger Cr., N. Ferrier, coll. 1949
Sucker Cr., N. Ferrier, coll. 1949

Battle Cr. Pine Cree Cr. Conglomerate Cr. Lonepine Cr. Nine Mile Cr. Loch Leven	Listed as stocked trout waters, 1981

Qu'Appelle Basin

Scissors Cr., C. Dunn, coll. 1982

Winnipegosis Basin

Prairie R., Larson, 1976 (E. fork)

Armit R. Fir R. Kinakin Cr. Overflowing R. Swan R. Woody R.	Listed as stocked trout waters, 1981

Saskatchewan Basin

Fairwell Cr., P.H. Edwards, coll. 1963
Otosquen R., Larson, 1976
White Gull Cr., Edwards, 1966

Brook trout . . . .

Trapper Cabin Cr., Larson, 1976
McDougal Cr., Larson, 1976
Fox Cr., Larson, 1976 (54°16' 104°28')
Bone Cr.)
Connell Cr.)
Waskwei R.)
Pasquia R.)
Glacier Cr.)
English Cr.)
Lars Cr.)
Nisbet Cr.)
Shapytka Cr.)
Steep Cr.)
Jackfish Cr.)
Sealey L.)
Opal L.)
Maistre L.)
Lost Echo Cr.)
Dorothy L.)
Konuto L.)
Nipawin L.)
Sand L.)

Listed as stocked trout waters, 1981

Churchill Basin

Lussier L., Koshinsky, 1968
Nipekamew Cr., Larson, 1976
Poplar Ridge L.)
Low Cr.)

Listed as stocked trout waters, 1981

Brook trout . . . .

Broad Cr.
Atchison L.
West Naniskak L.
Toland Bay L.
Italy L.
Five Fingers L.
Althouse L.

Internal Basins
Suffern L.
Oscar Cr.
Bear Cr.
Boiler Cr.

Listed as stocked trout waters, 1981

Splake, hybrid brook trout X lake trout Map 64

Qu'Appelle Basin
  Jahns Mine Strip)

Saskatchewan Basin) Listed as stocked trout waters, 1981
  Burtlein L.)
  Mitten L.)
  Pine L.)
  Sapphire L.)

Churchill Basin
  Little Raspberry L., J. Hines, SMNH, 1974
  Deer L.)
  Doreen L.)
  East L.)
  Fern L.) Listed as stocked trout waters, 1981
  Mullock L.)
  Keskuchow L.)

Kokanee, *Oncorhynchus nerka* (Walbaum) Map 65

Saskatchewan Basin

Constance L.)
Zeden L.) Listed as stocked trout waters, 1981
)

Common carp, Cyprinus carpio Linnaeus Map 66

Missouri Basin

Frenchman R., Atton, 1959; W.B. and M. Scott, ROM, 1955; T.A. Willock, NMC, 1970; L. Bevan, coll. 1978

East Poplar R., D.E. Snell, coll. 1976

Qu'Appelle Basin

Round L., M.L. Armbruster, coll. 1954; Atton, 1959; Atton and Johnson, 1962

Crooked L., Doyle, 1961a; Atton and Johnson, 1962

Katepwa L., Atton and Johnson, 1962

Lebret L., Atton and Johnson, 1962

Echo L., Atton and Johnson, 1962; Johnson, 1963c

Pasqua L., Atton and Johnson, 1962; Johnson, 1963c; T.A. Willock, NMC, 1970

Wascana Cr., P. McCart, coll. 1970

Buffalo Pound L., D.W. Pegg, coll. 1969

Last Mountain L., Smith, 1976

Assiniboine R., Atton, 1959

Good Spirit Marsh, W.R. Puddicombe, coll. 1976

Lake of the Prairies, R.E. Jensen, coll. 1983

Smallmouth bass, *Micropterus dolomieui* Lacepede Map 67

Saskatchewan Basin

Sturgeon-weir R., Introduced in Manitoba and reported at the road crossing at Amisk L.

Churchill Basin

Waskesiu L., Rawson, 1945; .... creel census, 1950; Marshall and Johnson, 1971

No populations of this species are established in Saskatchewan.

Largemouth bass, Micropterus salmoides (Lacepede) Map 68

Qu'Appelle Basin

Boundary Dam Res., E.L. Dean, coll. 1983 (introduced)

Internal Basins

Willows Res., F.M. Atton, coll. 1951; P.H. Edwards, coll. 1956

No populations of this species have been found since 1969 in Saskatchewan.

Freshwater drum, _Aplodinotus_ _grunniens_ Rafinesque Map 69

Saskatchewan Basin

Swiftcurrent Cr., Atton and Johnson, 1955; Willock, 1969

Two specimens which were found dead were submitted to the University of Saskatchewan, Biology Department. No other collections have been made.

4.2 MAPS

There are 68 maps showing the occurrence of 67 species or forms. The base map of the hydrography of the province and surrounding areas shows eight drainage basins which are in three different continental watersheds.

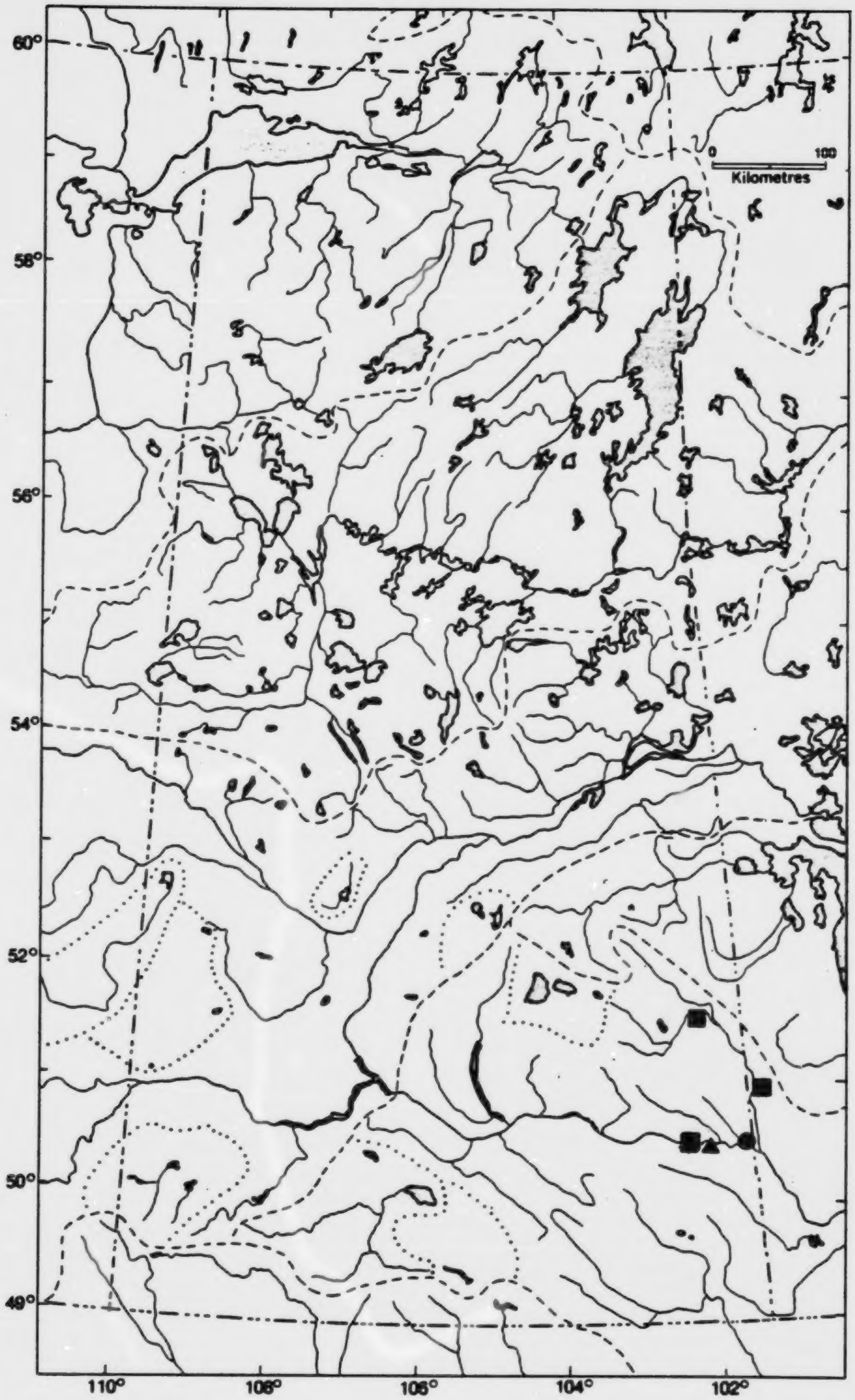
Watershed:	Gulf of Mexico	Hudson Bay	Arctic Ocean
Drainage:	Missouri	Qu'Appelle	Arctic
		Winnipegosis	
		Saskatchewan	
		Internal	
		Churchill	
		Kazan	

The drainage basin boundaries are shown by dashed lines. The eight disjunct areas that compose the internal (endorheic) drainage basin are delineated by dotted lines. These areas occur within the Qu'Appelle and Saskatchewan drainage basins. With the exception of these areas, the finer division of drainage basins into systems is not shown (see Fig. 1).

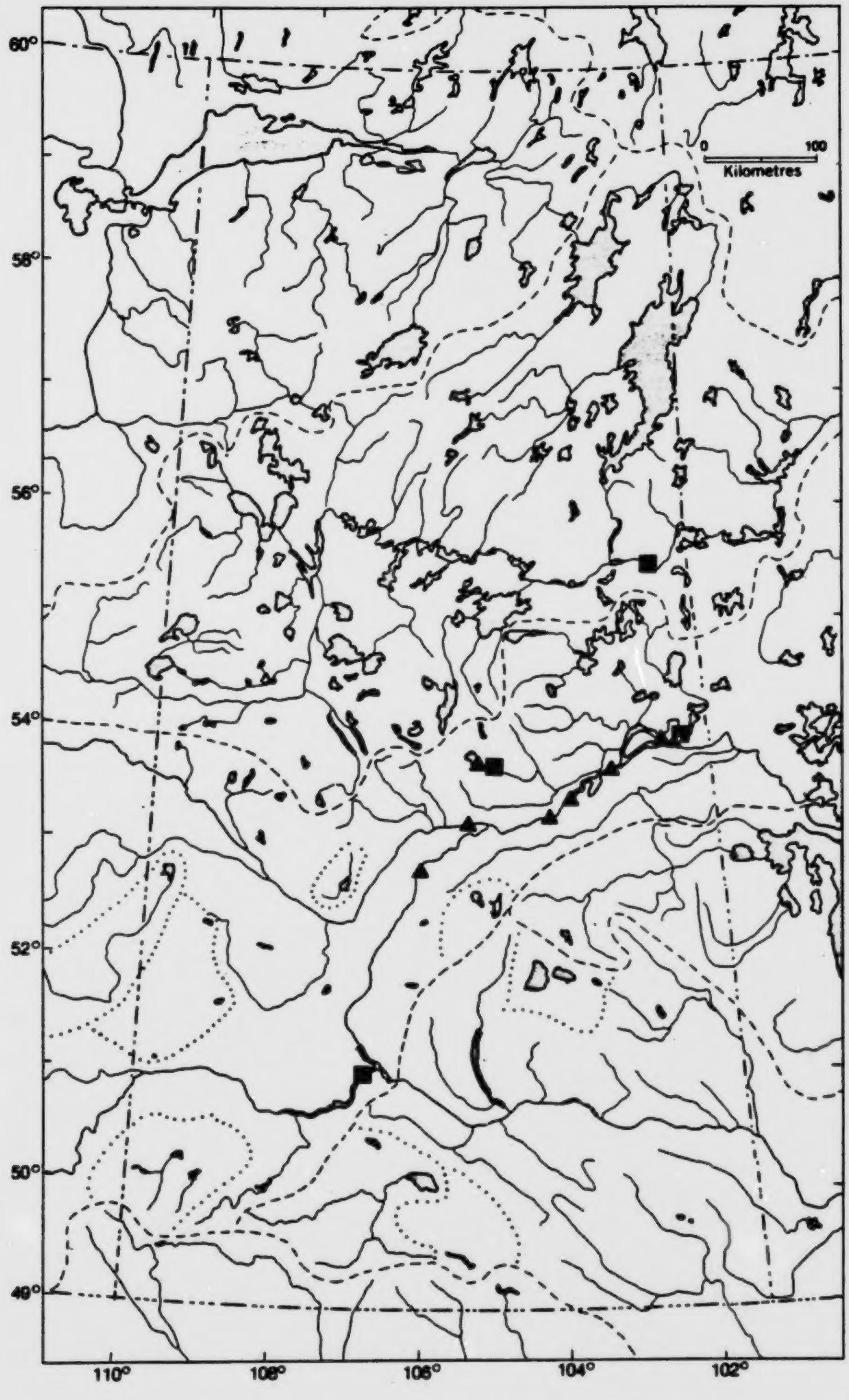
The symbols on the maps indicate the following information:

Kind of record	Native species	Introduced forms	
		Established	Reported
Museum	●		
Literature	▲	▲	△
Collector	■	■	□

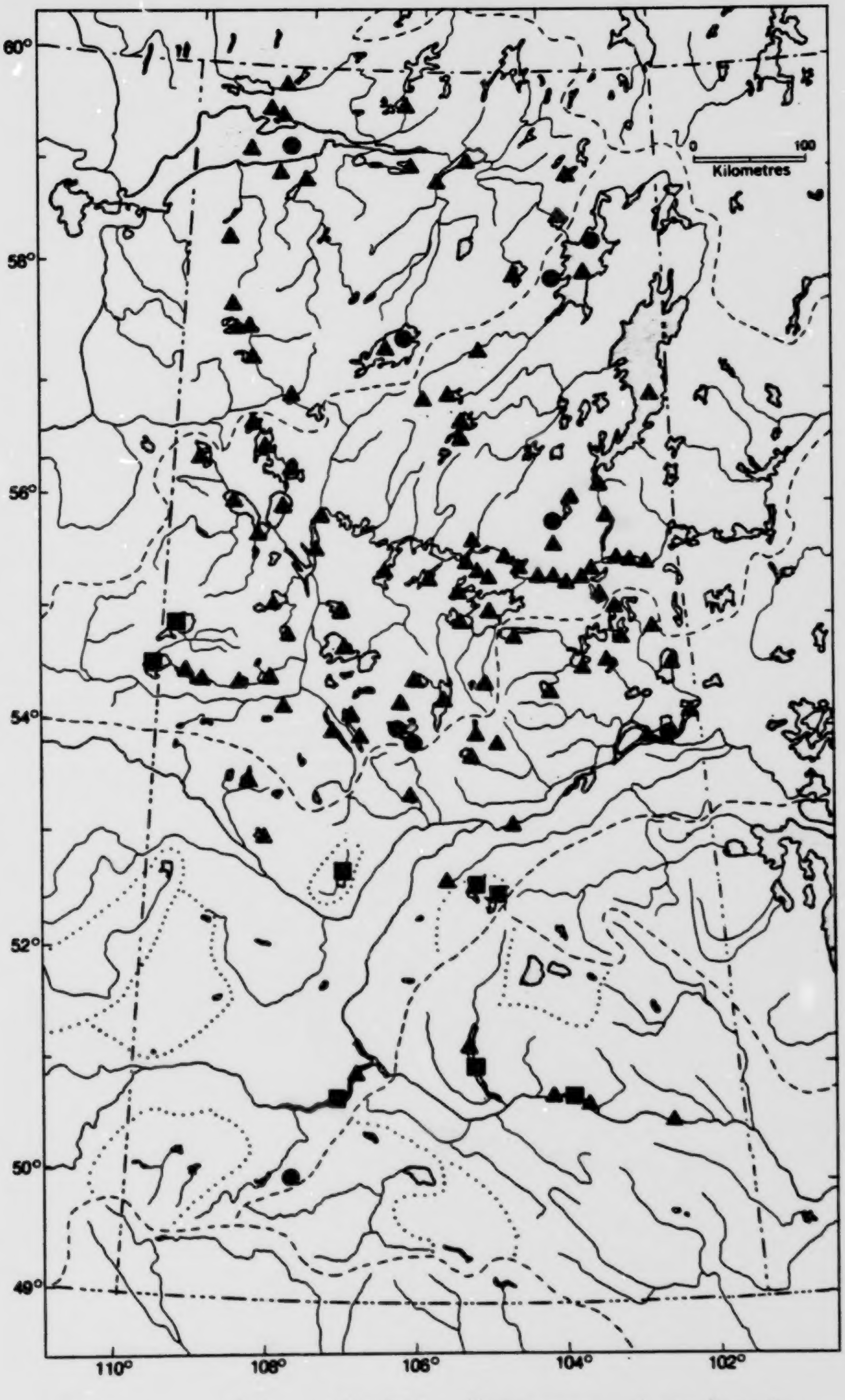
SPECIES MAPS


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

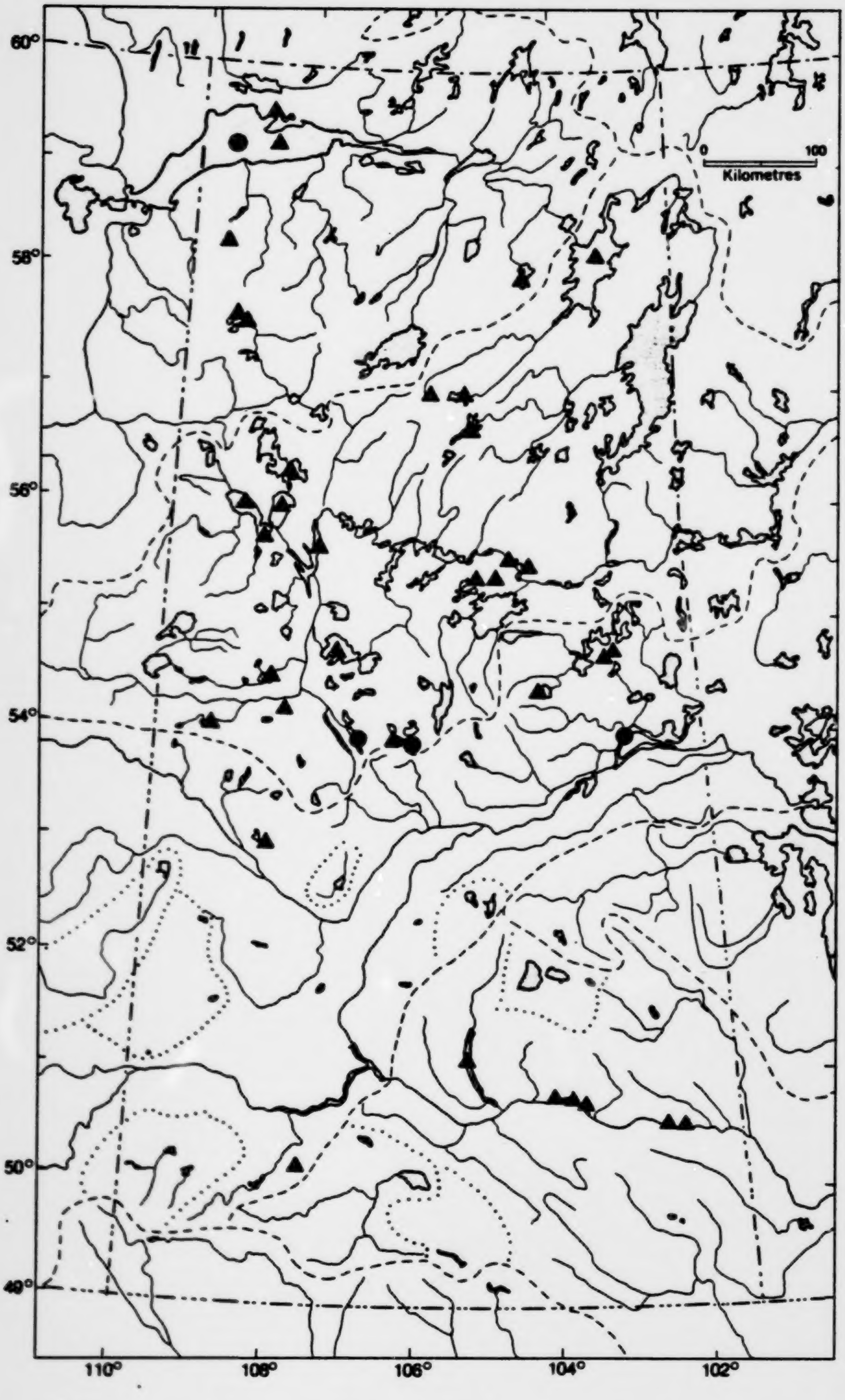
Map 1. Chestnut lamprey, Ichthyomyzon castaneus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 2. Lake sturgeon, Acipenser fulvescens

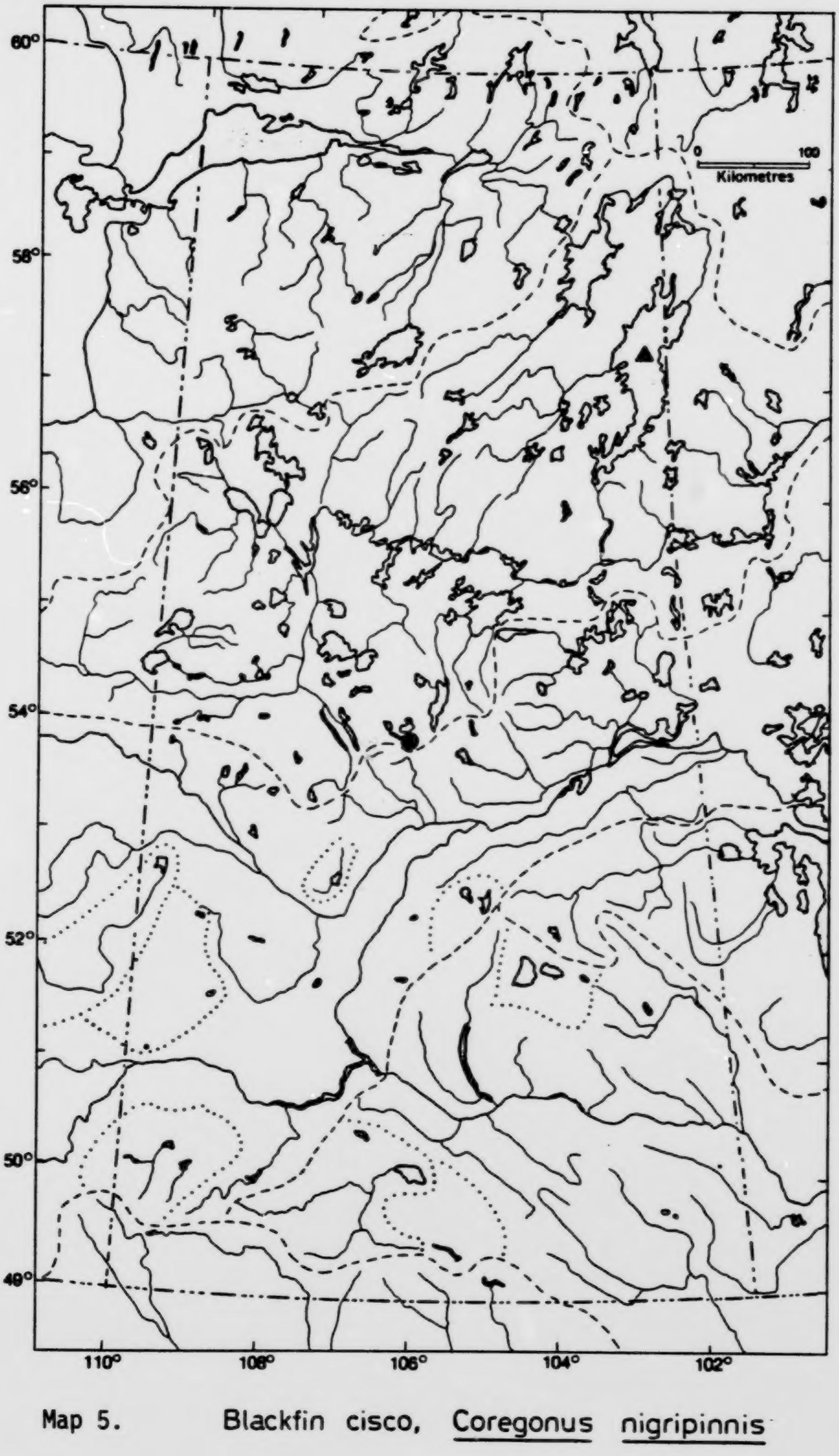

60°
58°
56°
54°
52°
50°
49°
0
100
Kilometres
110°
108°
106°
104°
102°

Map 3. Lake whitefish, Coregonus clupeaformis

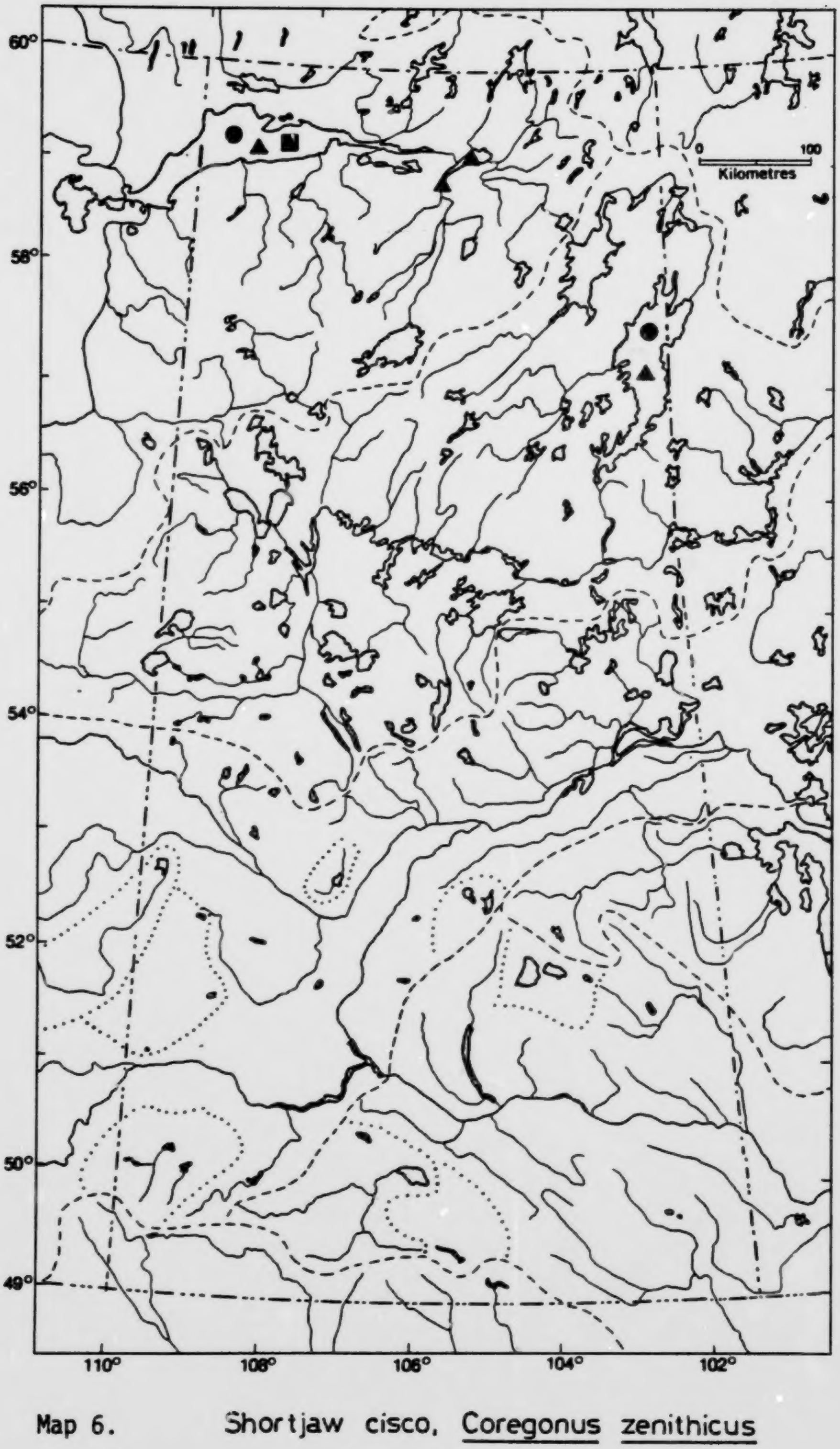


60°
58°
56°
54°
52°
50°
49°
0
100
Kilometres
110°
108°
106°
104°
102°

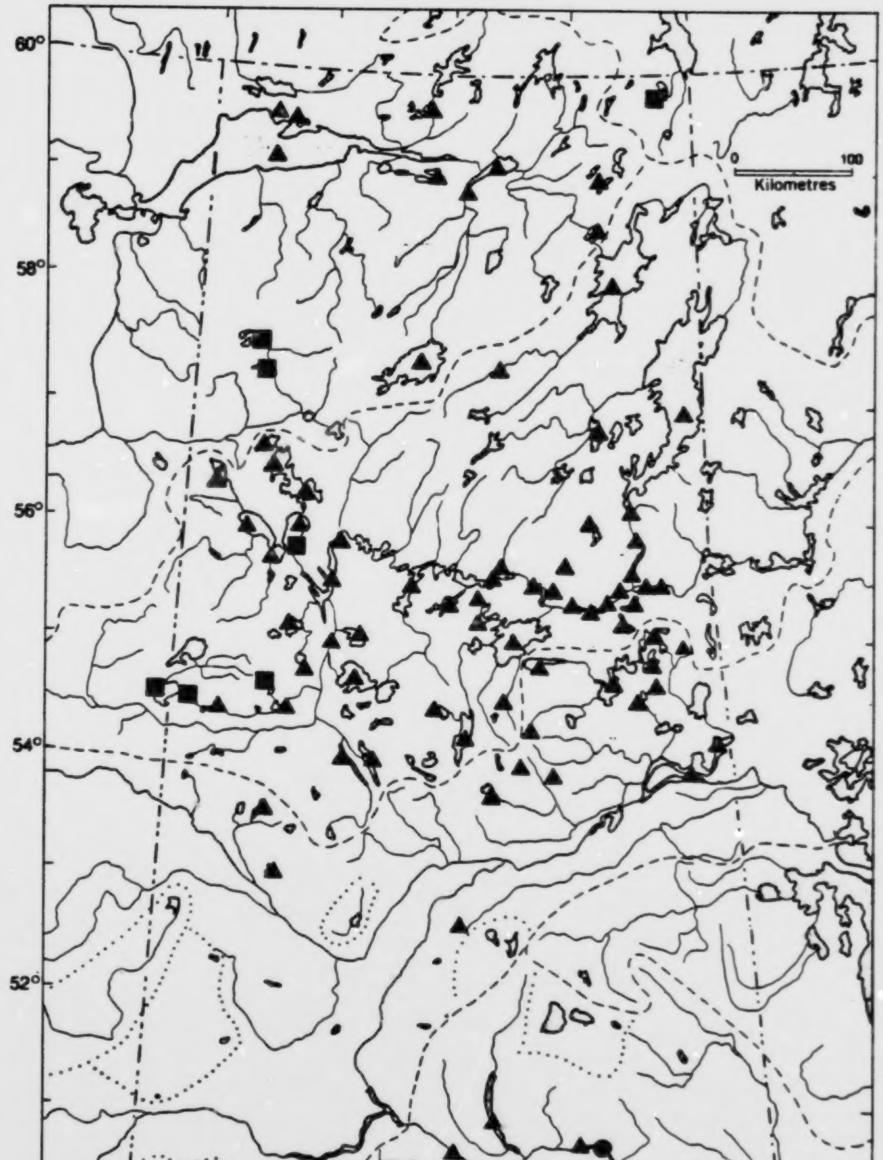
Map 4. Lake cisco, Coregonus artedii


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

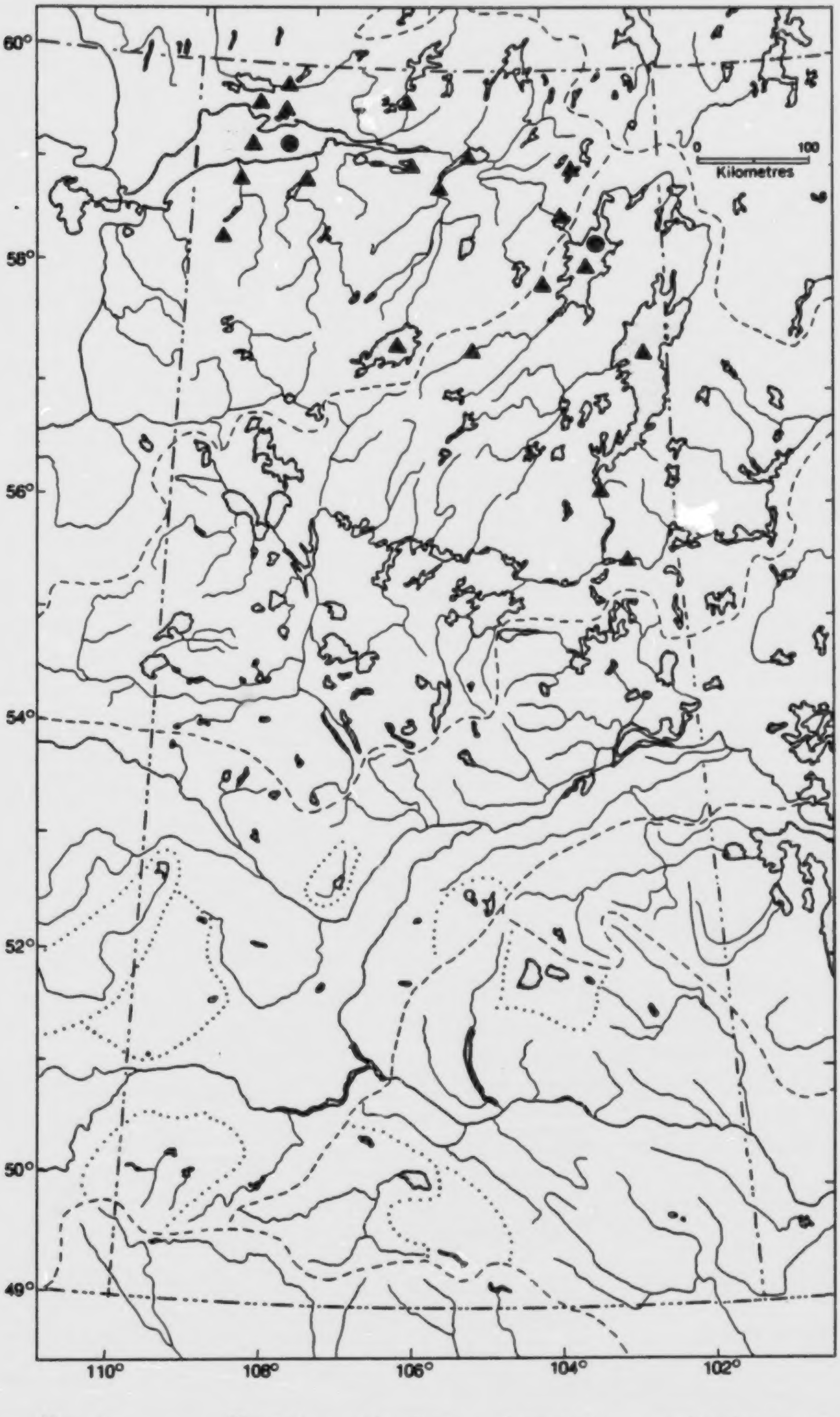
Map 5. Blackfin cisco, *Coregonus* *nigripinnis*


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

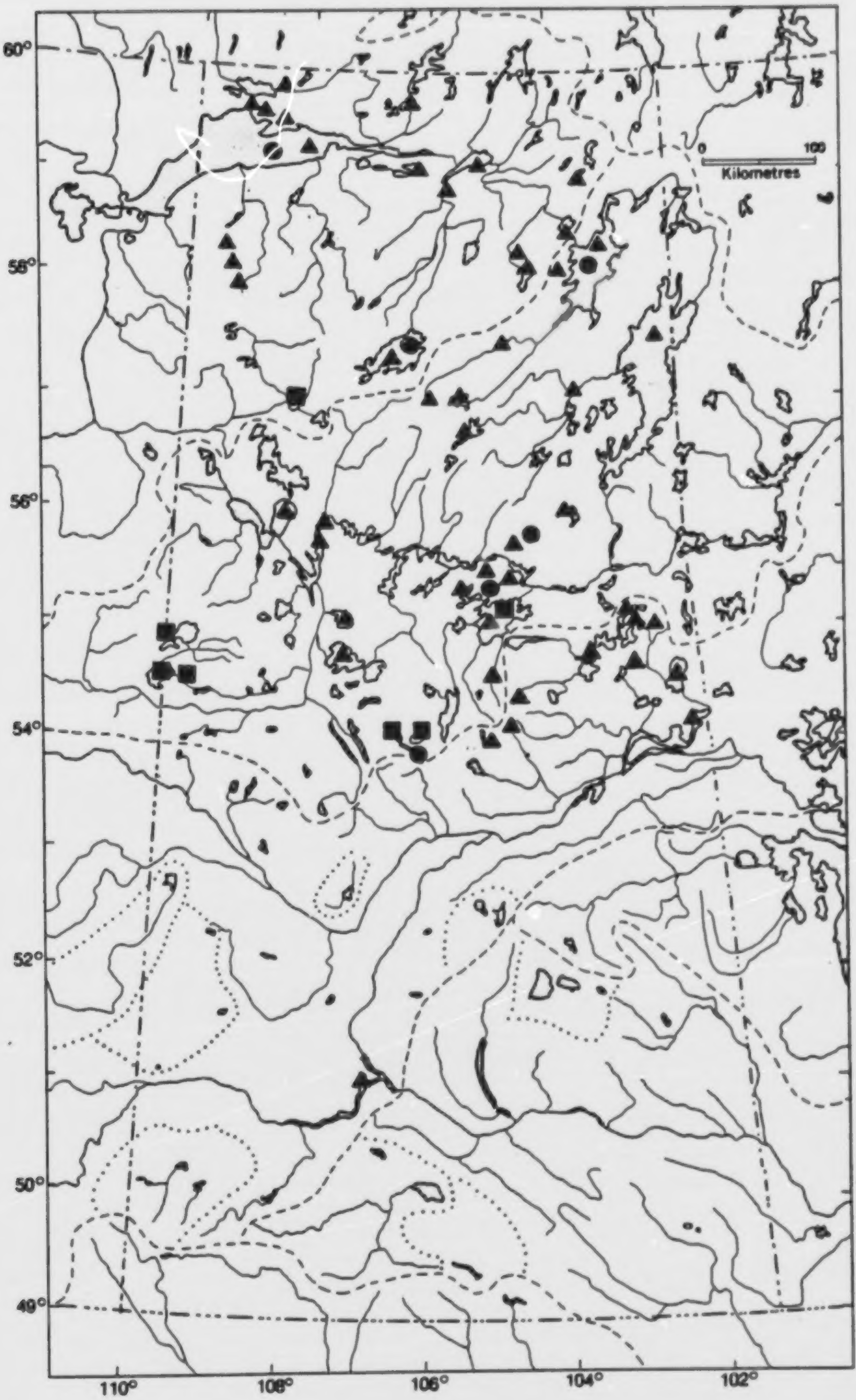
Map 6. Shortjaw cisco, Coregonus zenithicus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

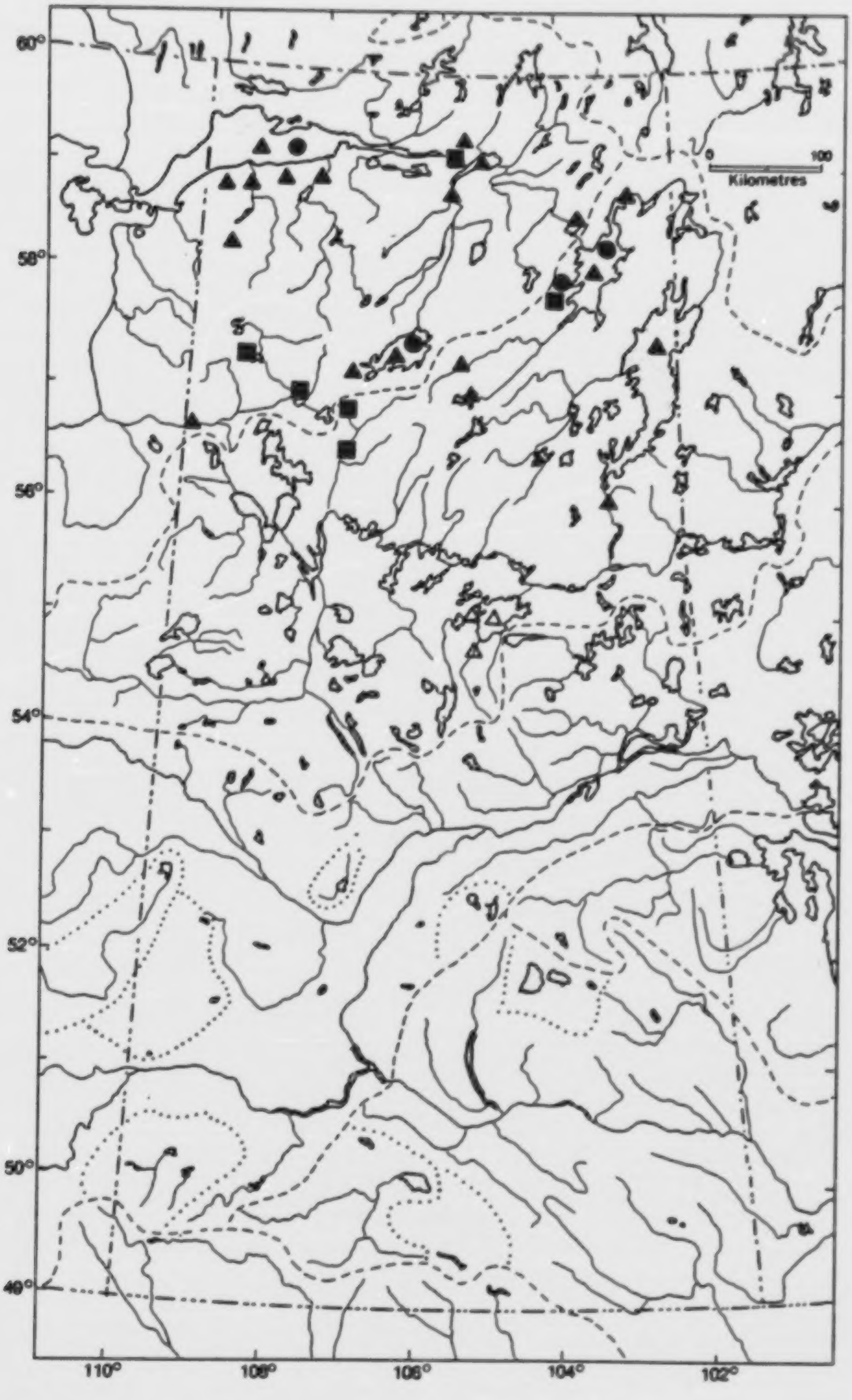
Map 7. Cisco, unidentified


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

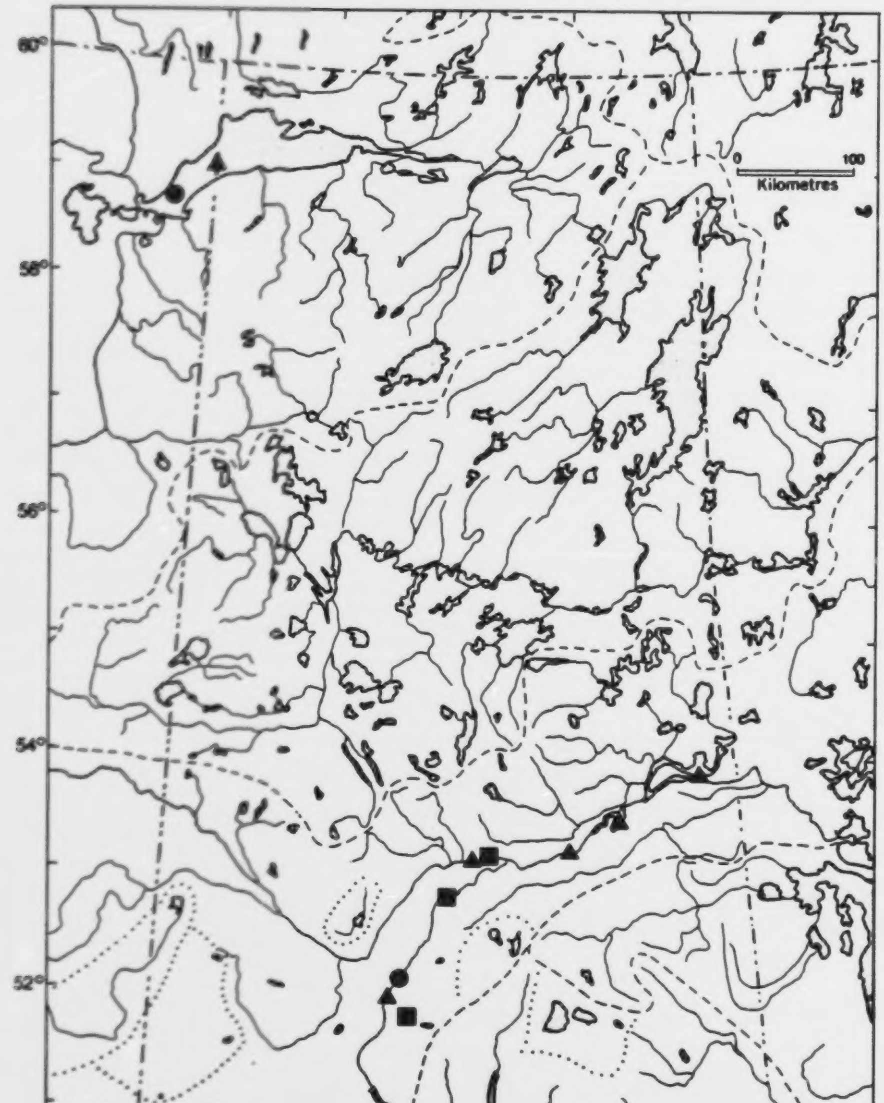
Map 8. Round whitefish, Prosopium cylindraceum


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

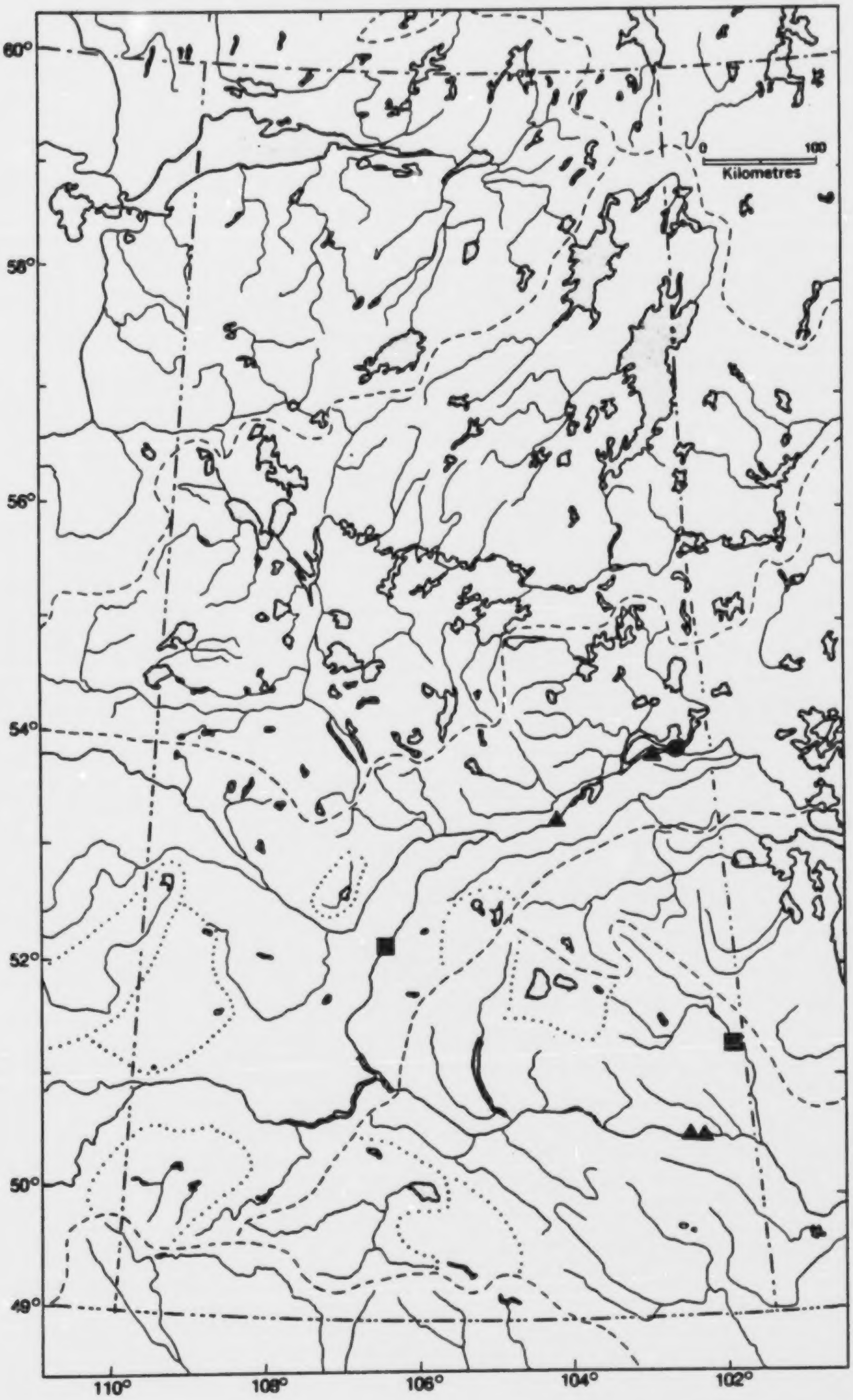
Map 9. Lake trout, Salvelinus namaycush


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

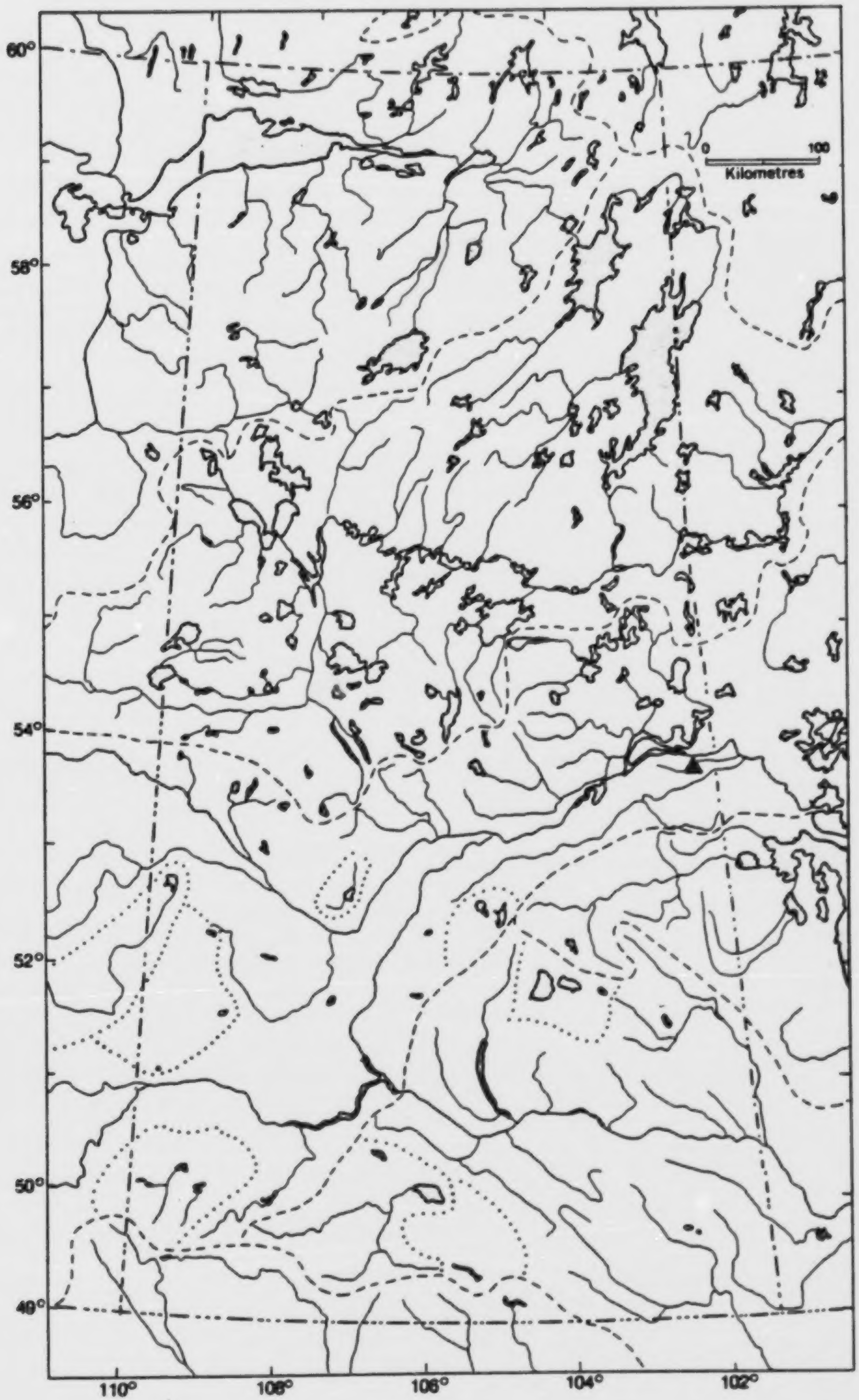
Map 10. Arctic grayling, Thymallus arcticus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

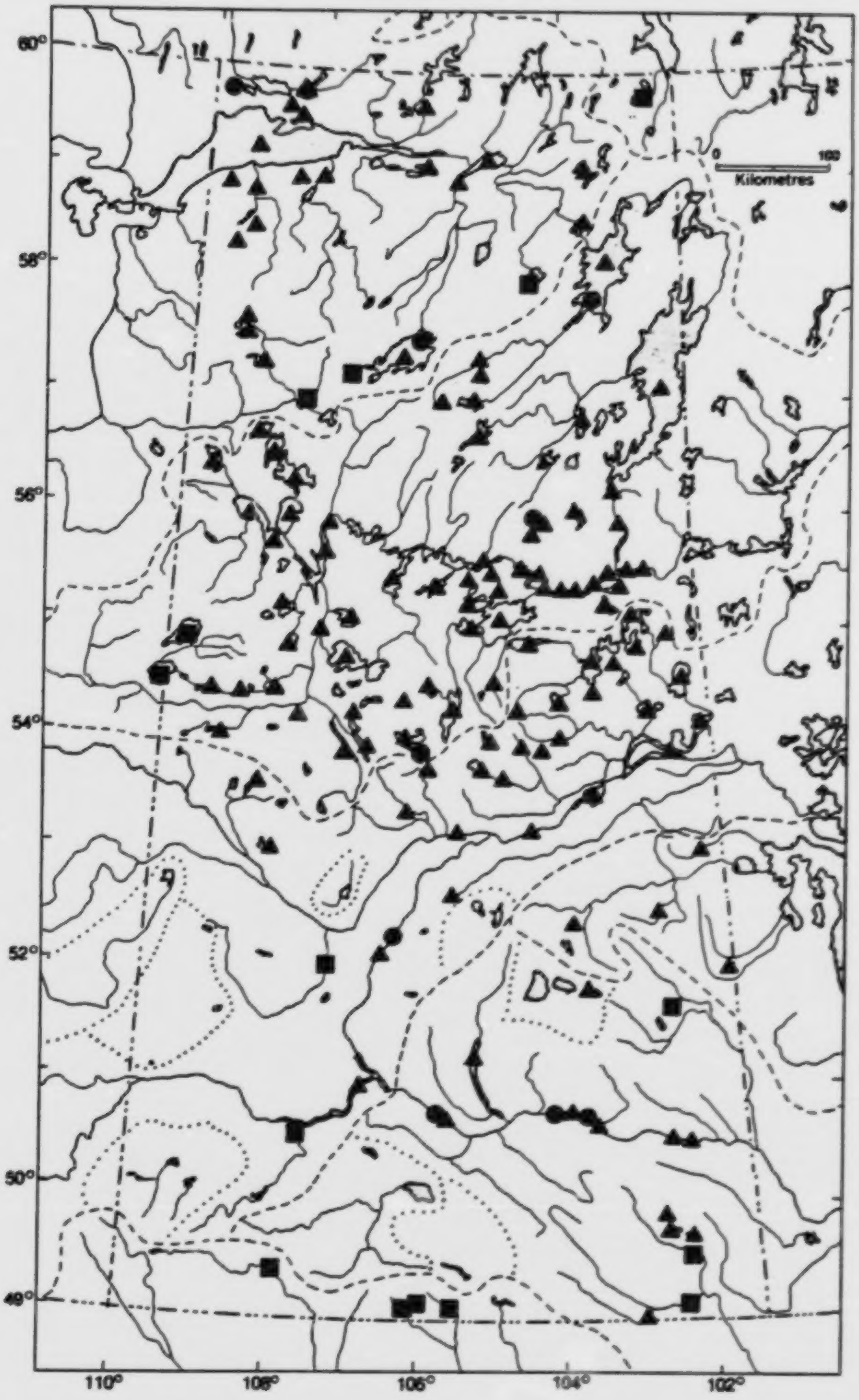
Map 11. Goldeye, Hiodon alosoides


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

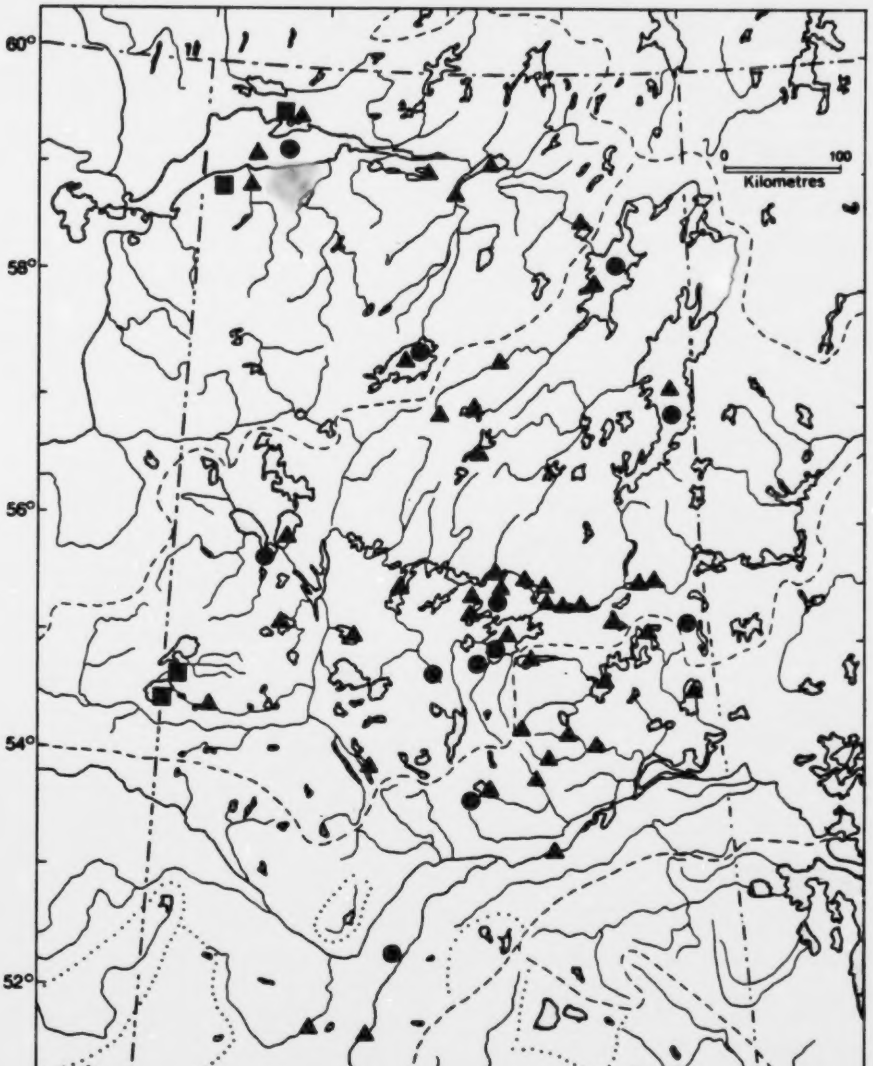
Map 12. Mooneye, *Hiodon tergisus*


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

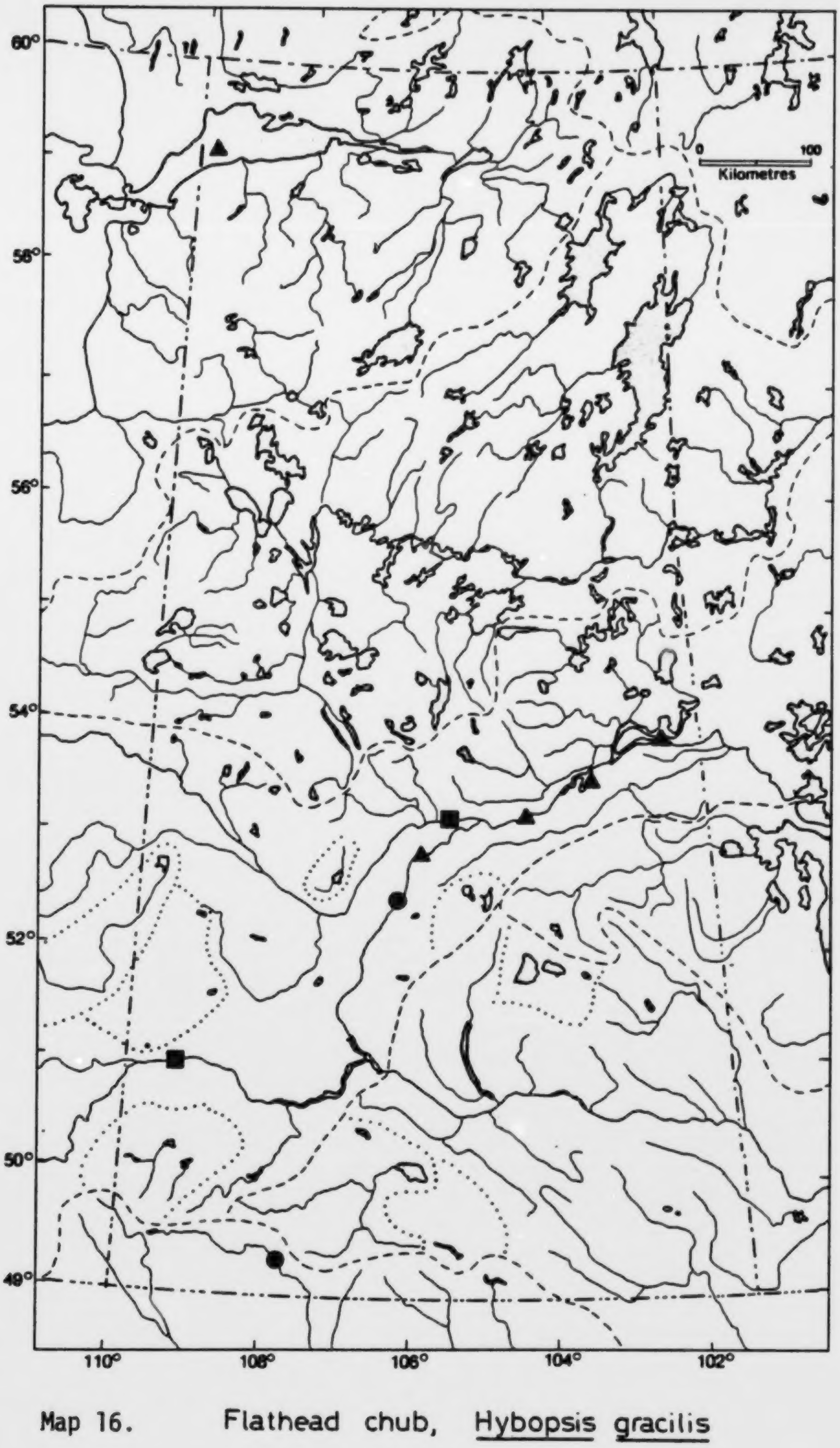
Map 13. Central mudminnow, Umbra limi


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

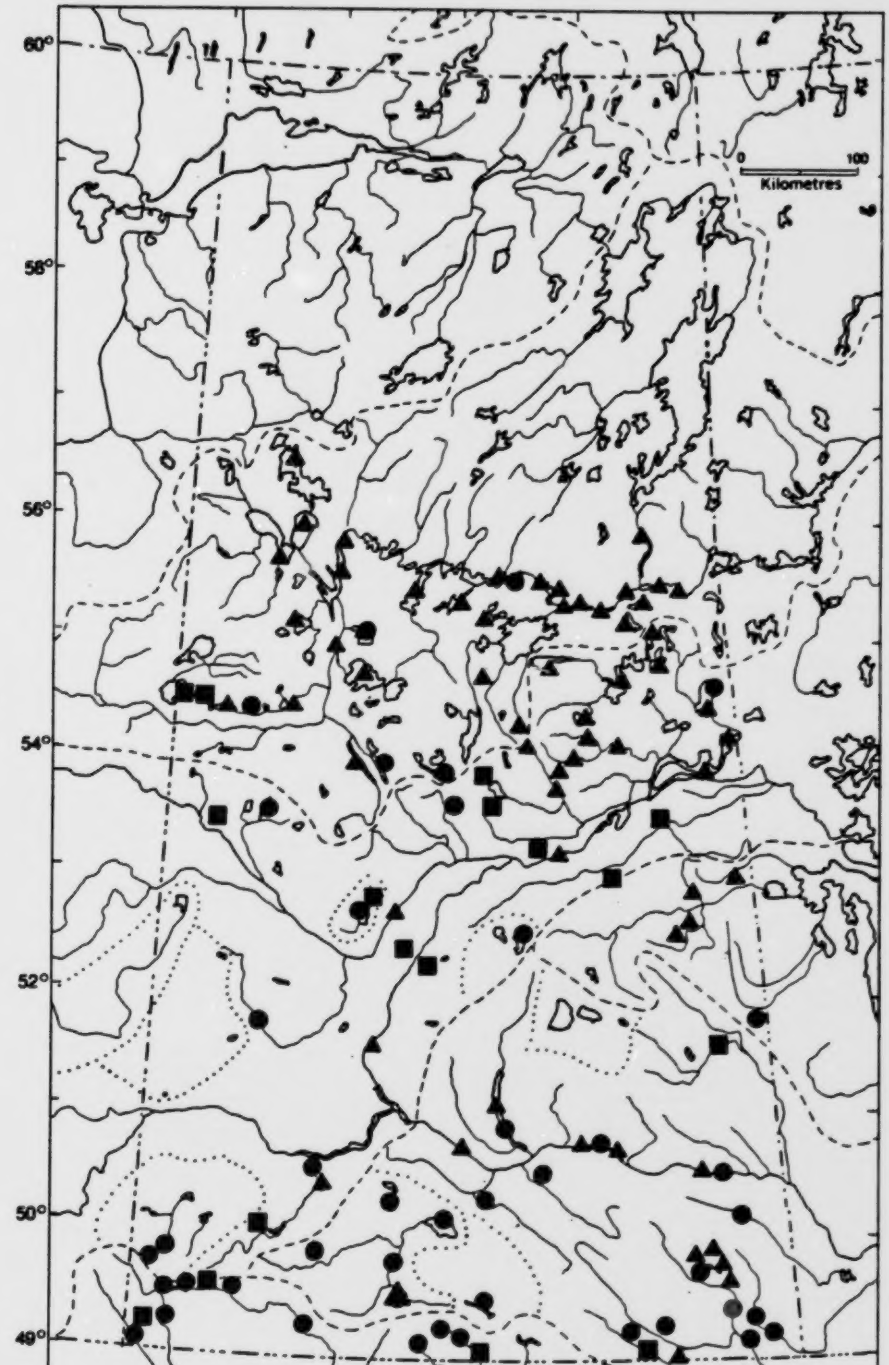
Map 14. Northern pike, Esox lucius


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

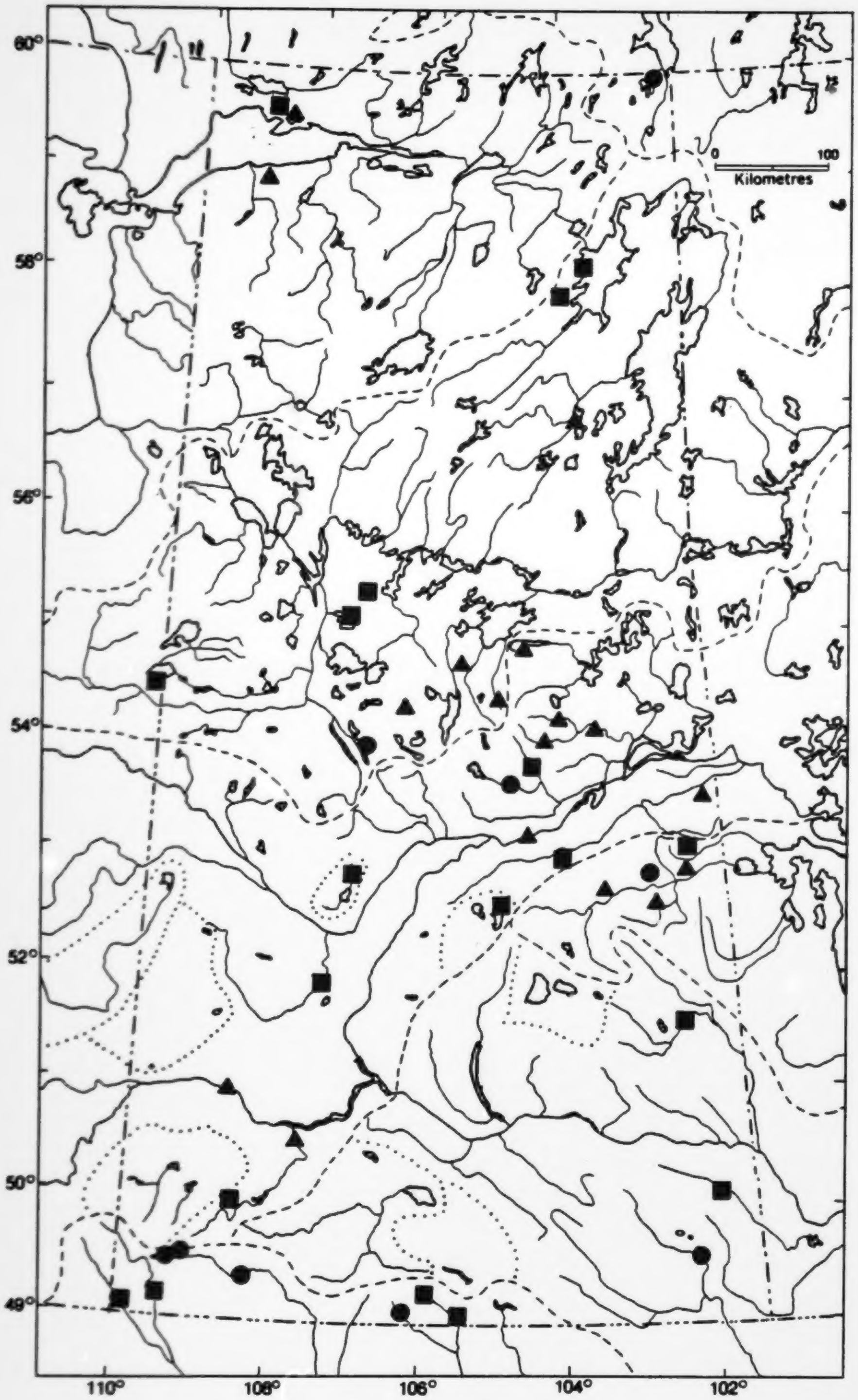
Map 15. Lake chub, Couesius plumbeus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

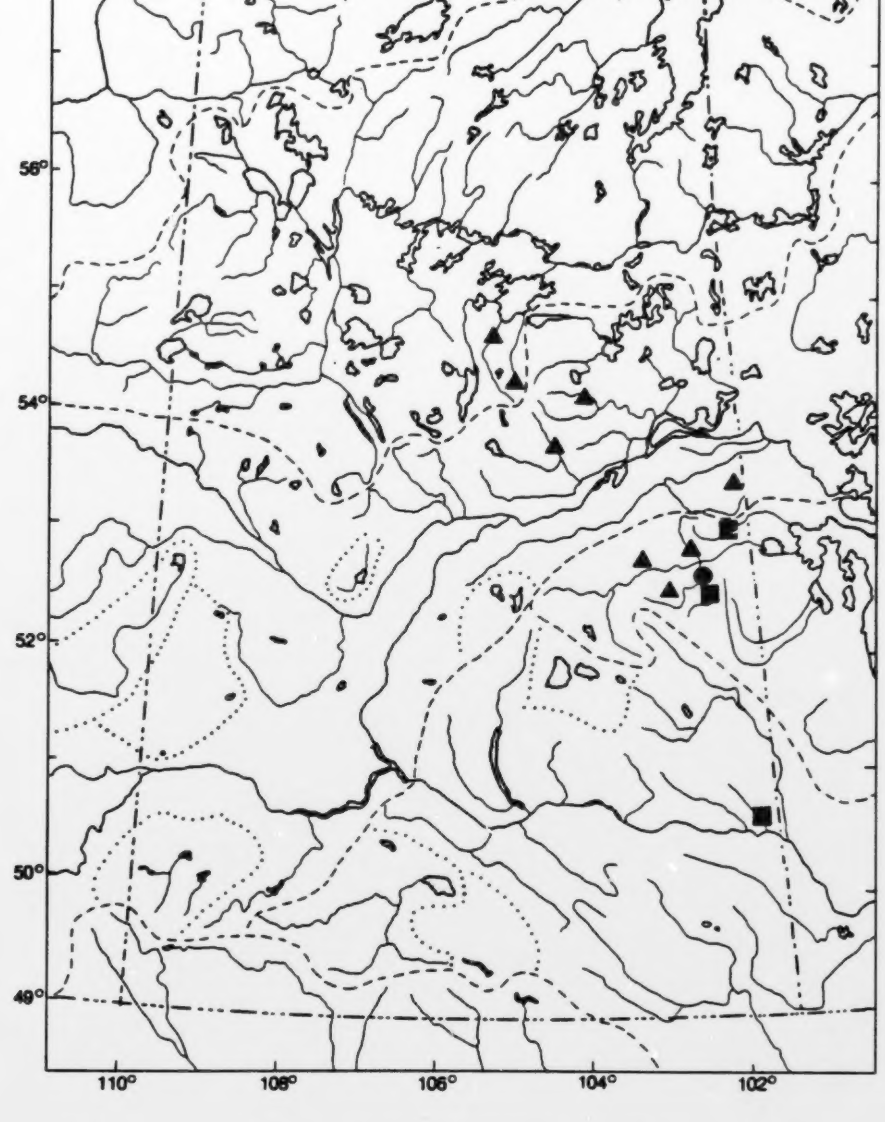
Map 16. Flathead chub, Hybopsis gracilis


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

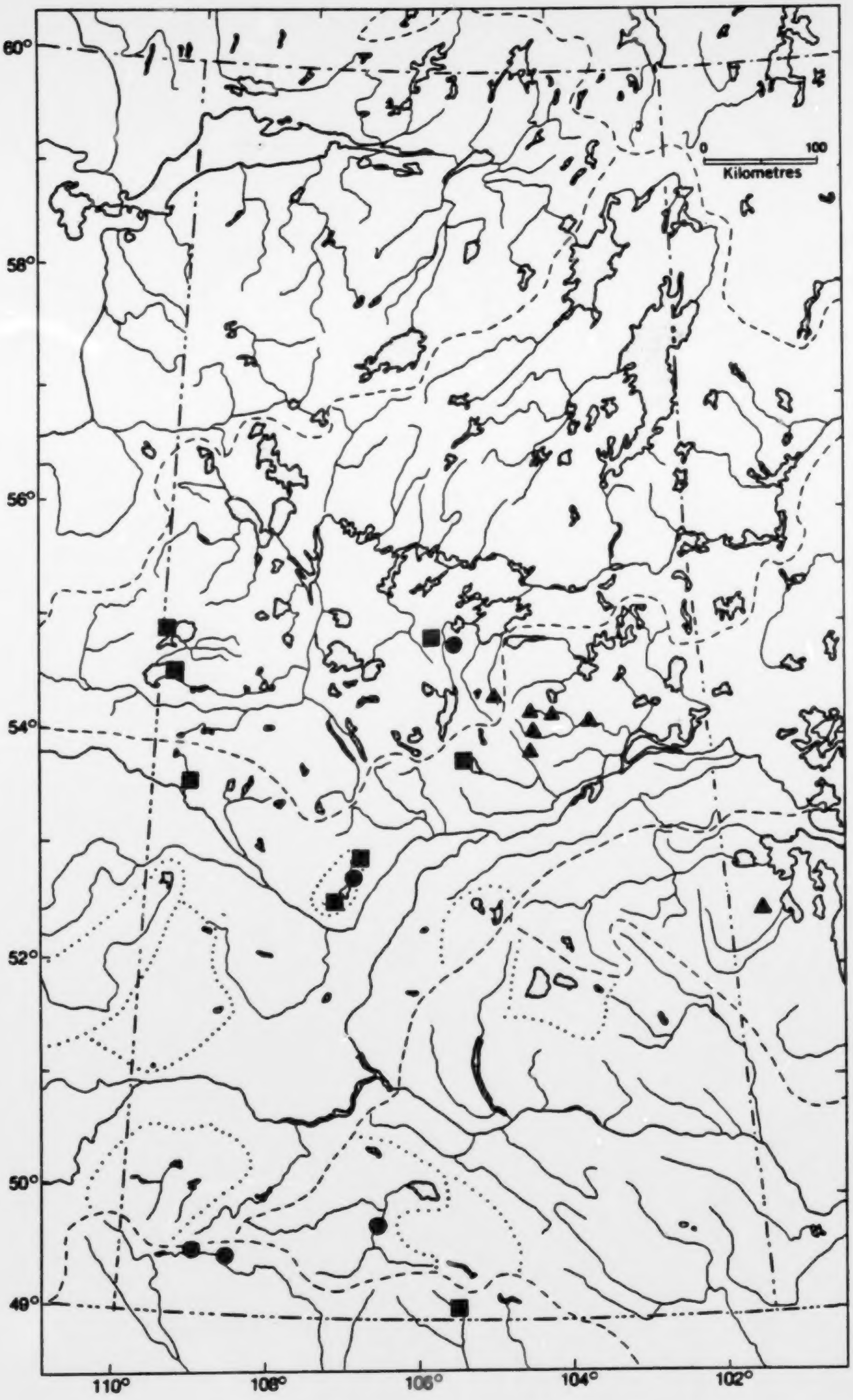
Map 17. Fathead minnow, Pimephales promelas


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

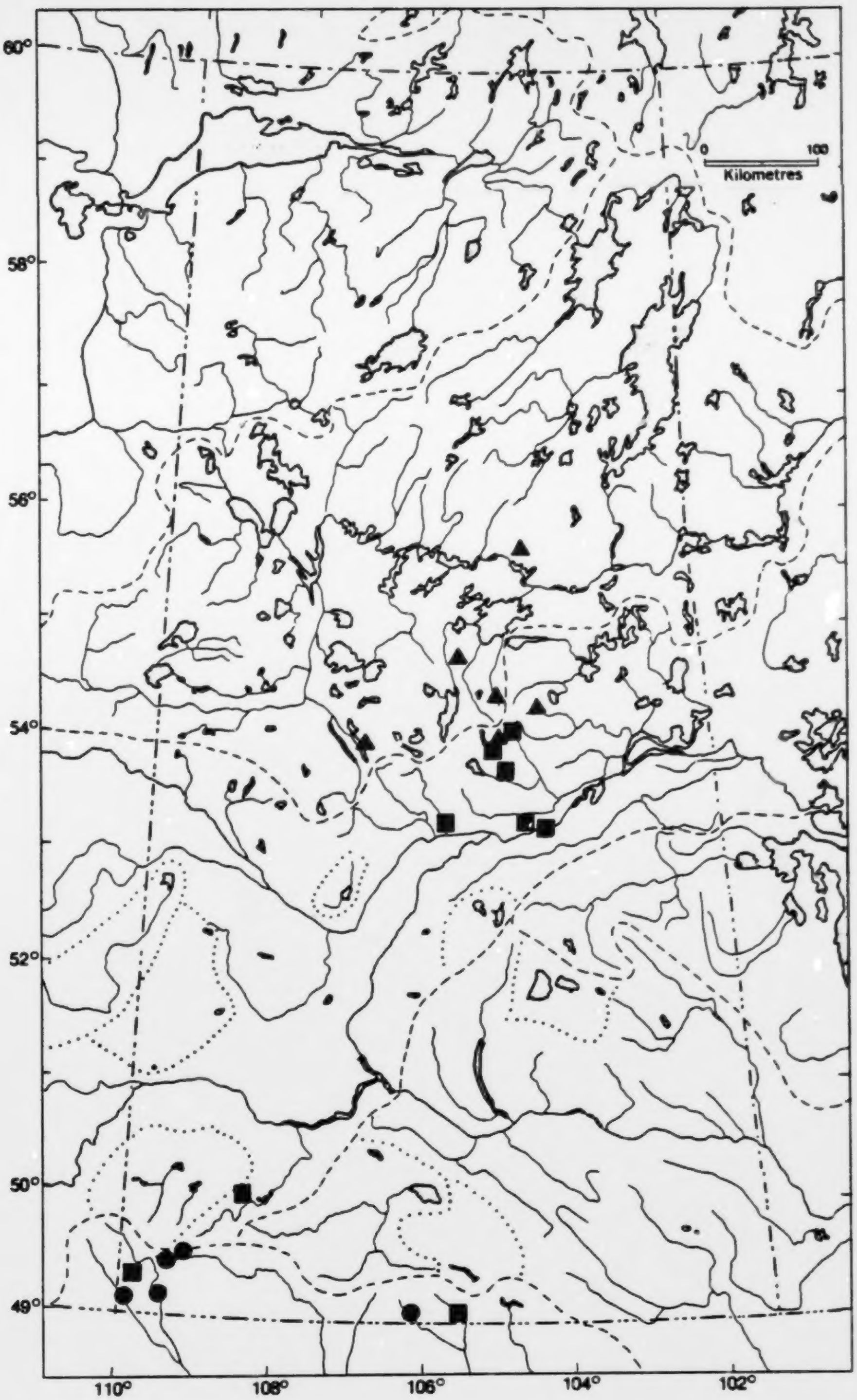
Map 18. Pearl dace, Semotilus margarita


60°
58°
56°
54°
52°
50°
49°
0
100
Kilometres
110°
108°
106°
104°
102°

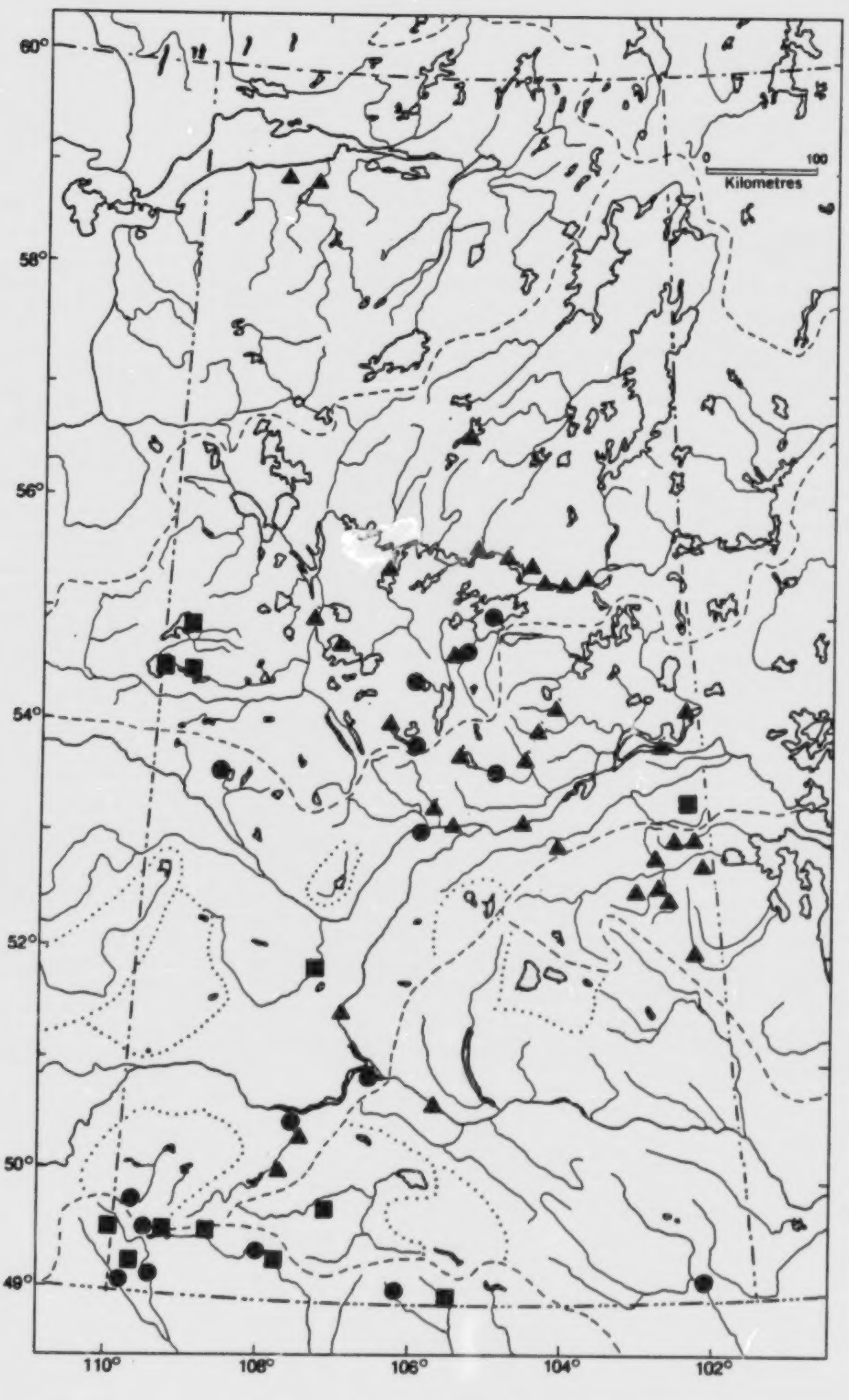
Map 19. Creek chub, *Semotilus atromaculatus*


60°
58°
56°
54°
52°
50°
49°
0
100
Kilometres
110°
108°
106°
104°
102°

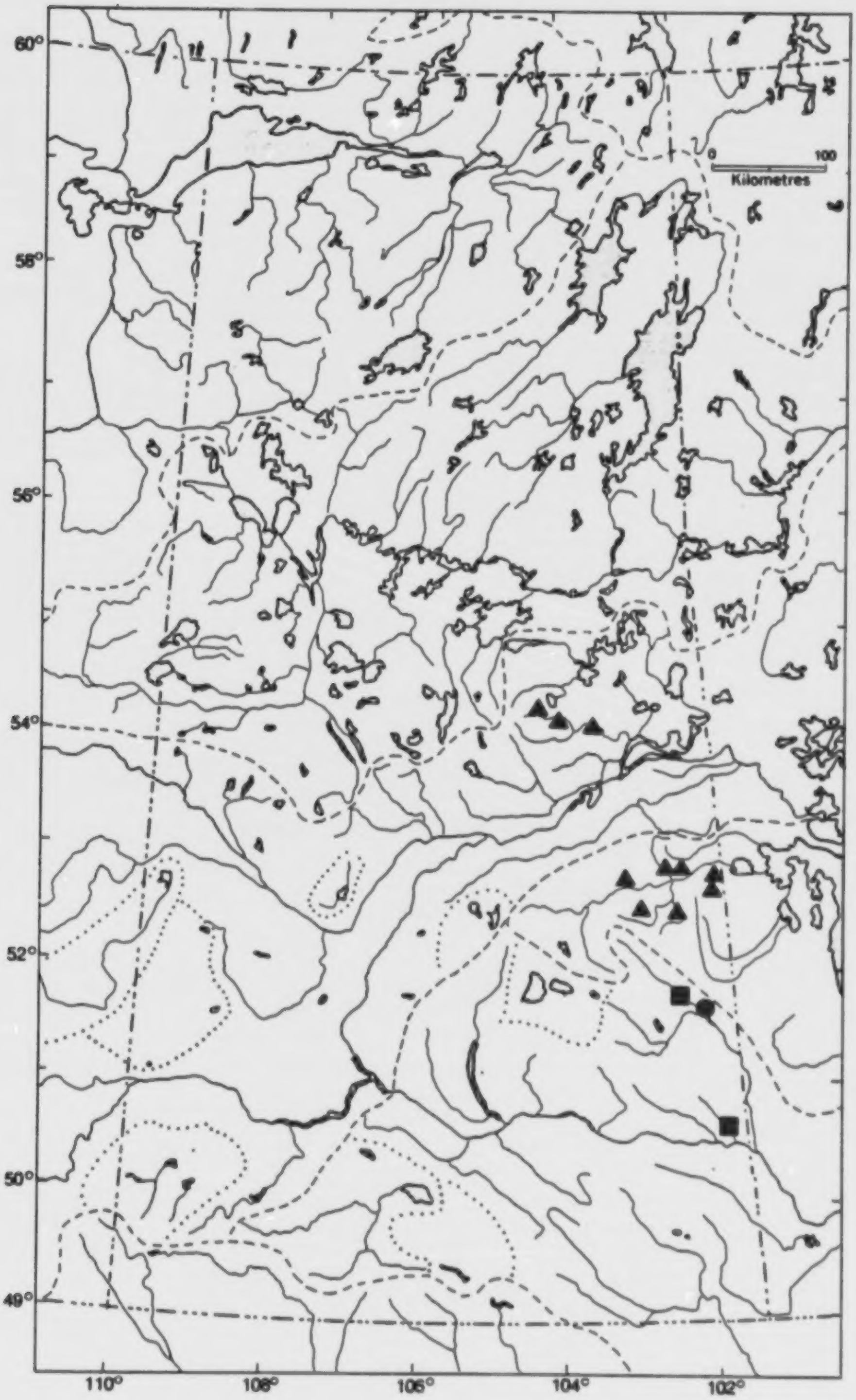
Map 20. Finescale dace, Chrosomus neogaeus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

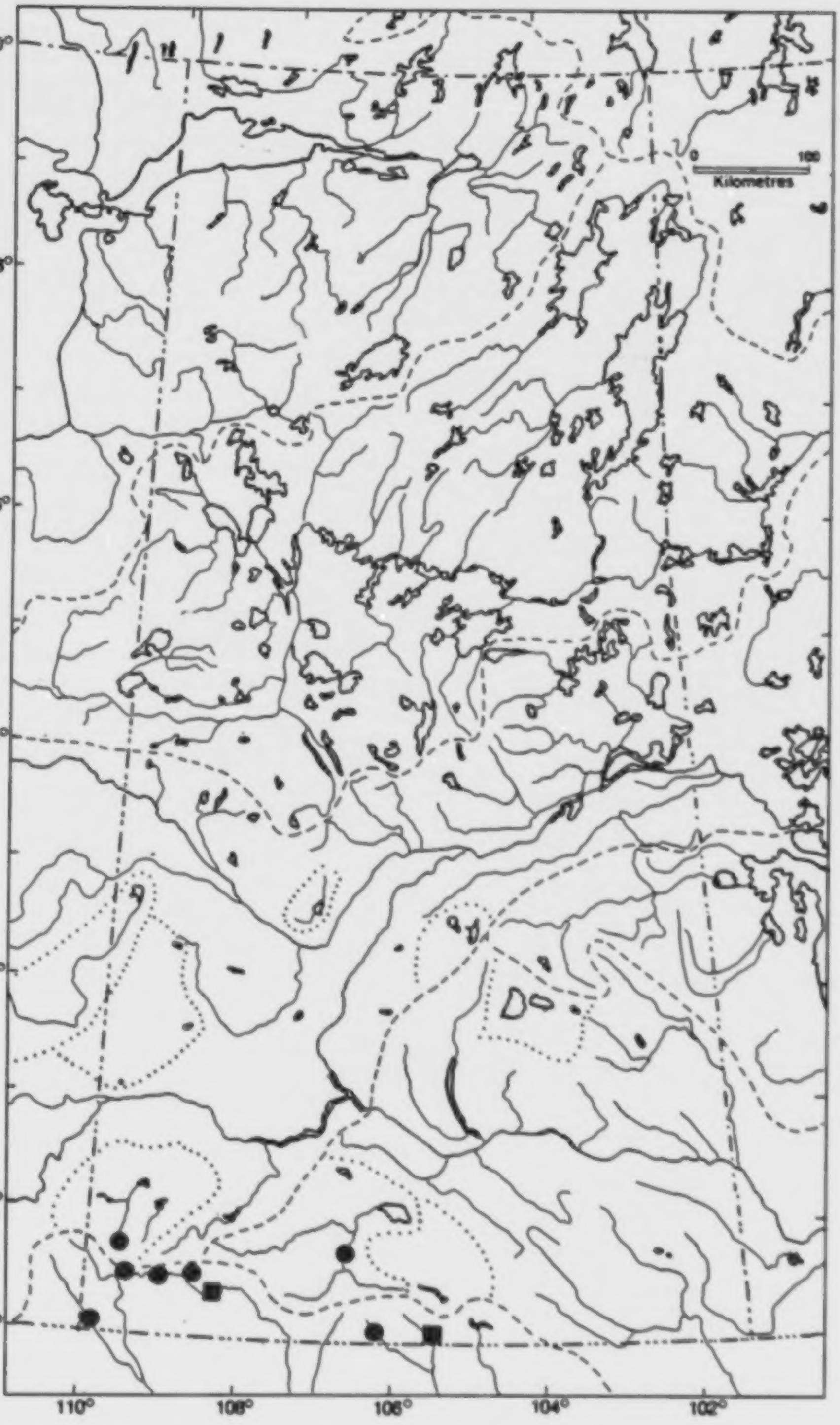
Map 21. Northern redbelly dace, _Chrosomus_ _eos_


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

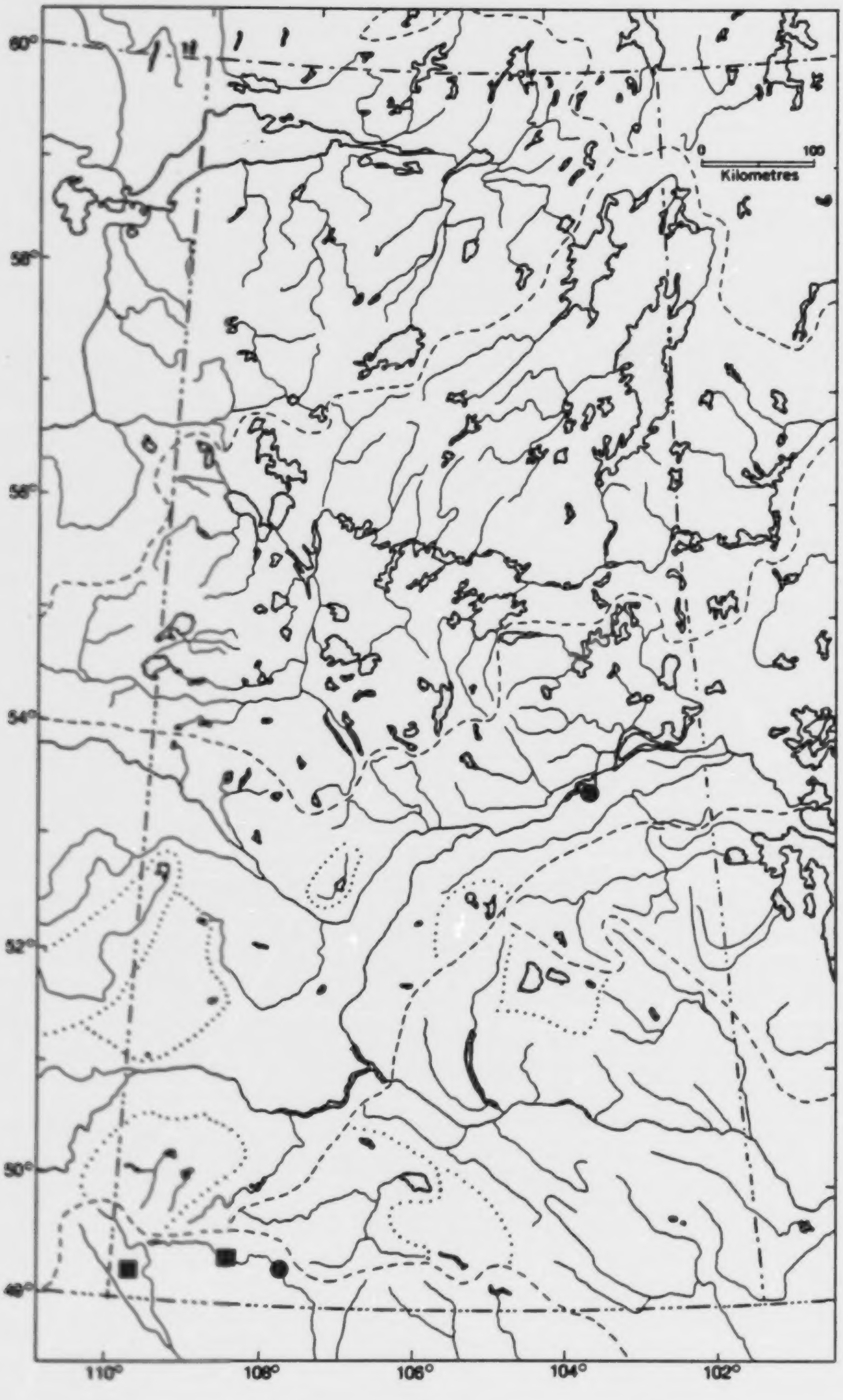
Map 22. Longnose dace, Rhinichthys cataractae


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

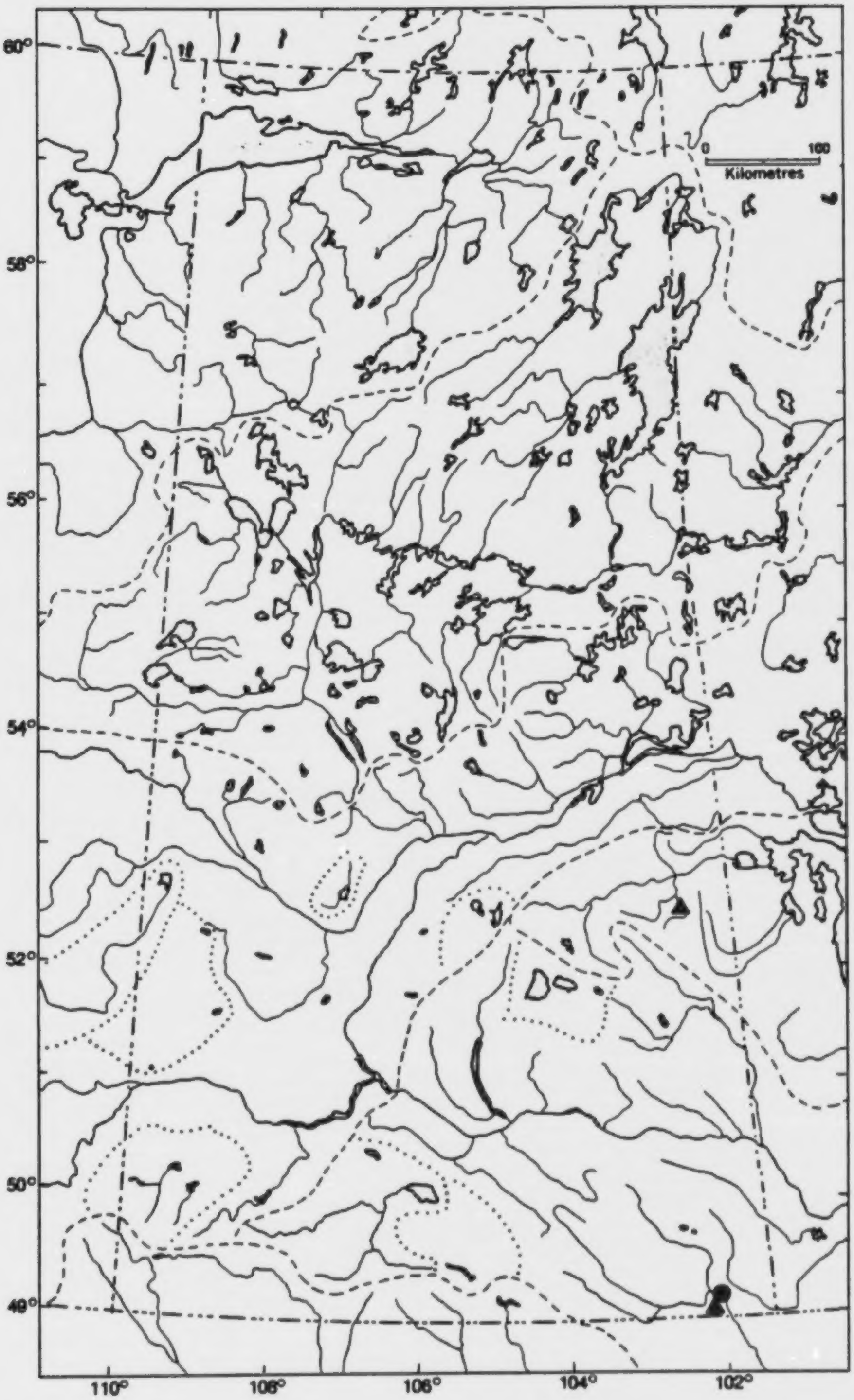
Map 23. Blacknose dace, Rhinichthys atratulus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

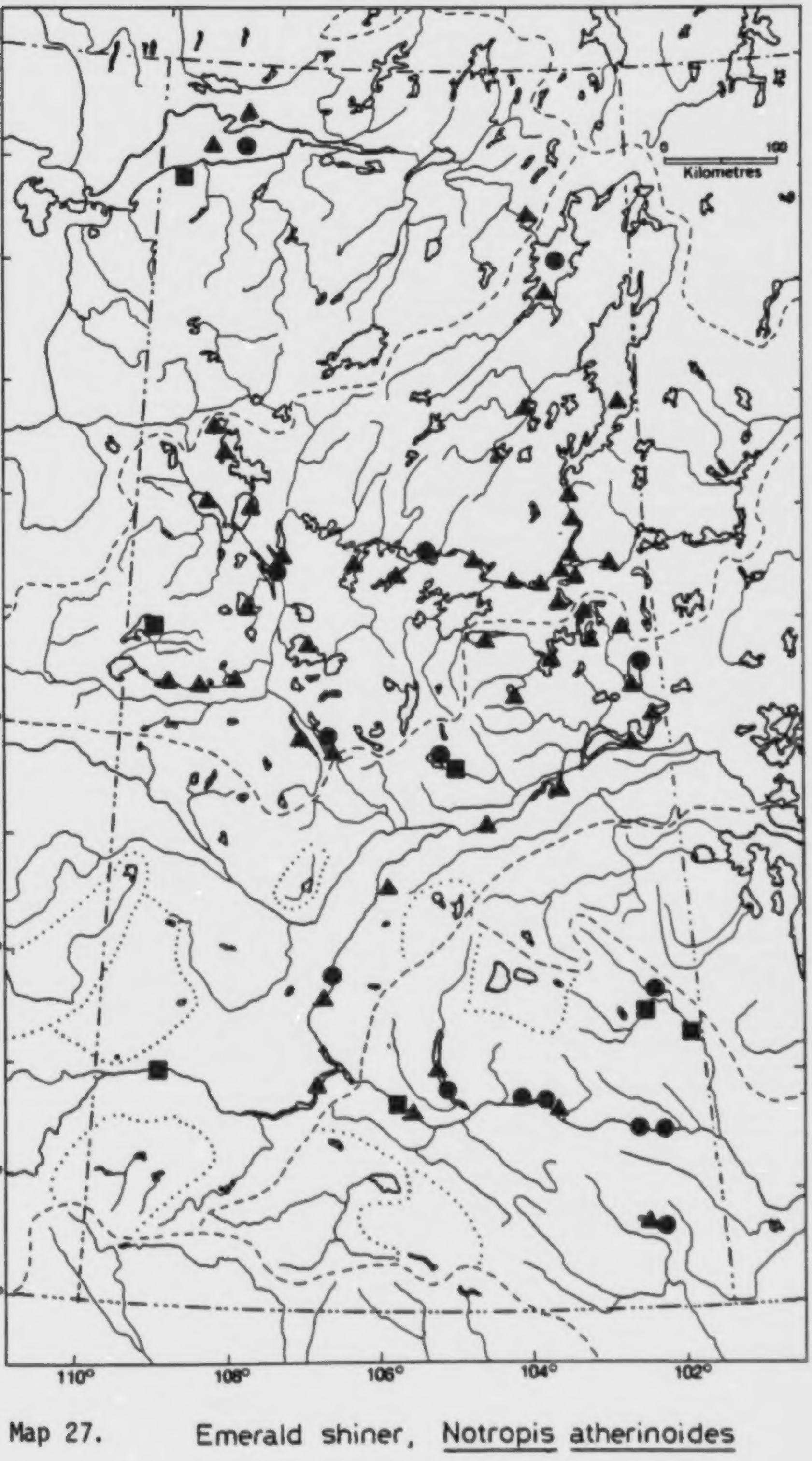
Map 24. Brassy minnow, Hybognathus hankinsoni


60°
58°
56°
54°
52°
50°
48°
110°
108°
106°
104°
102°
0
100
Kilometres

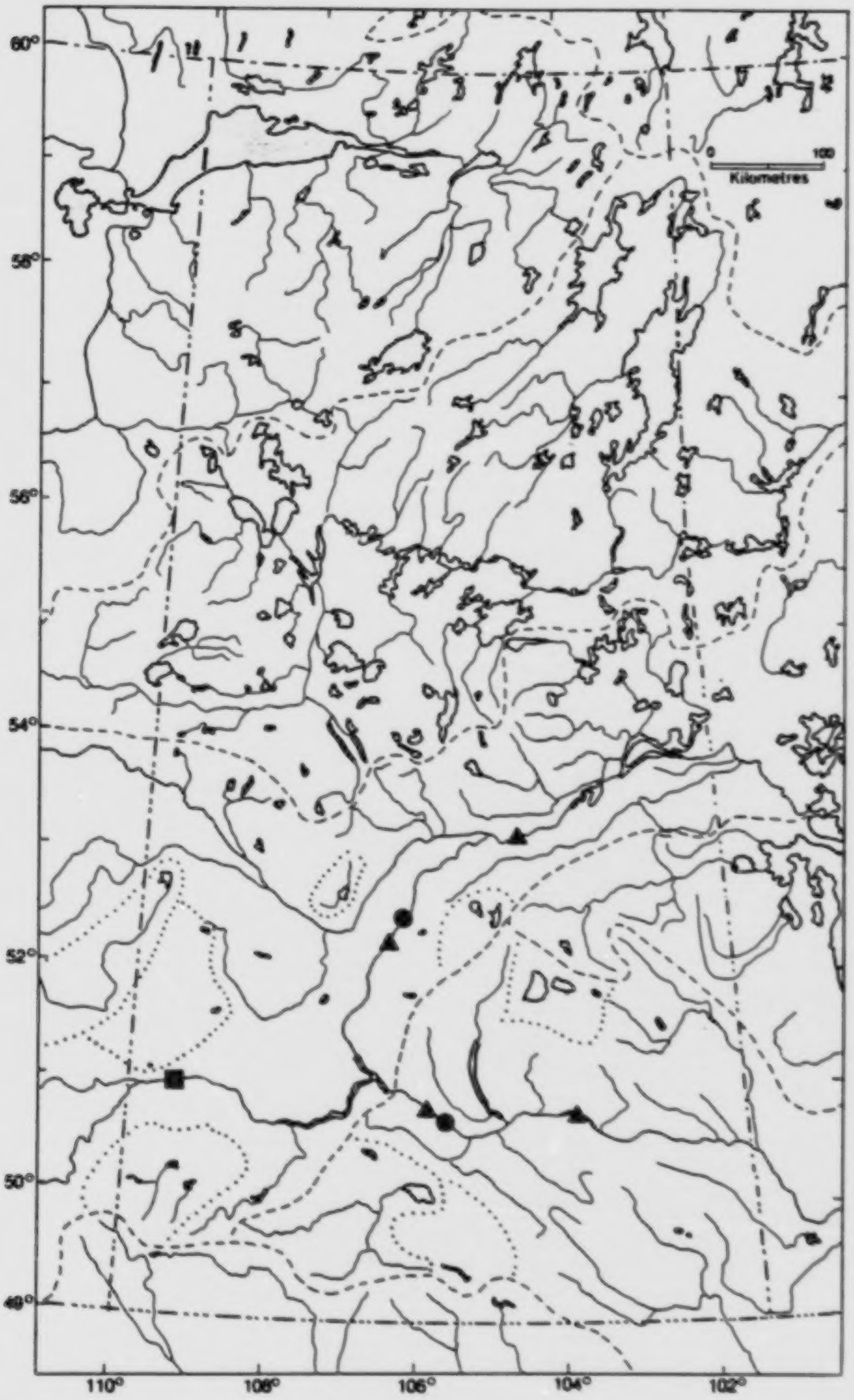
Map 25. Western silvery minnow, _Hybognathus_ _argyritis_


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

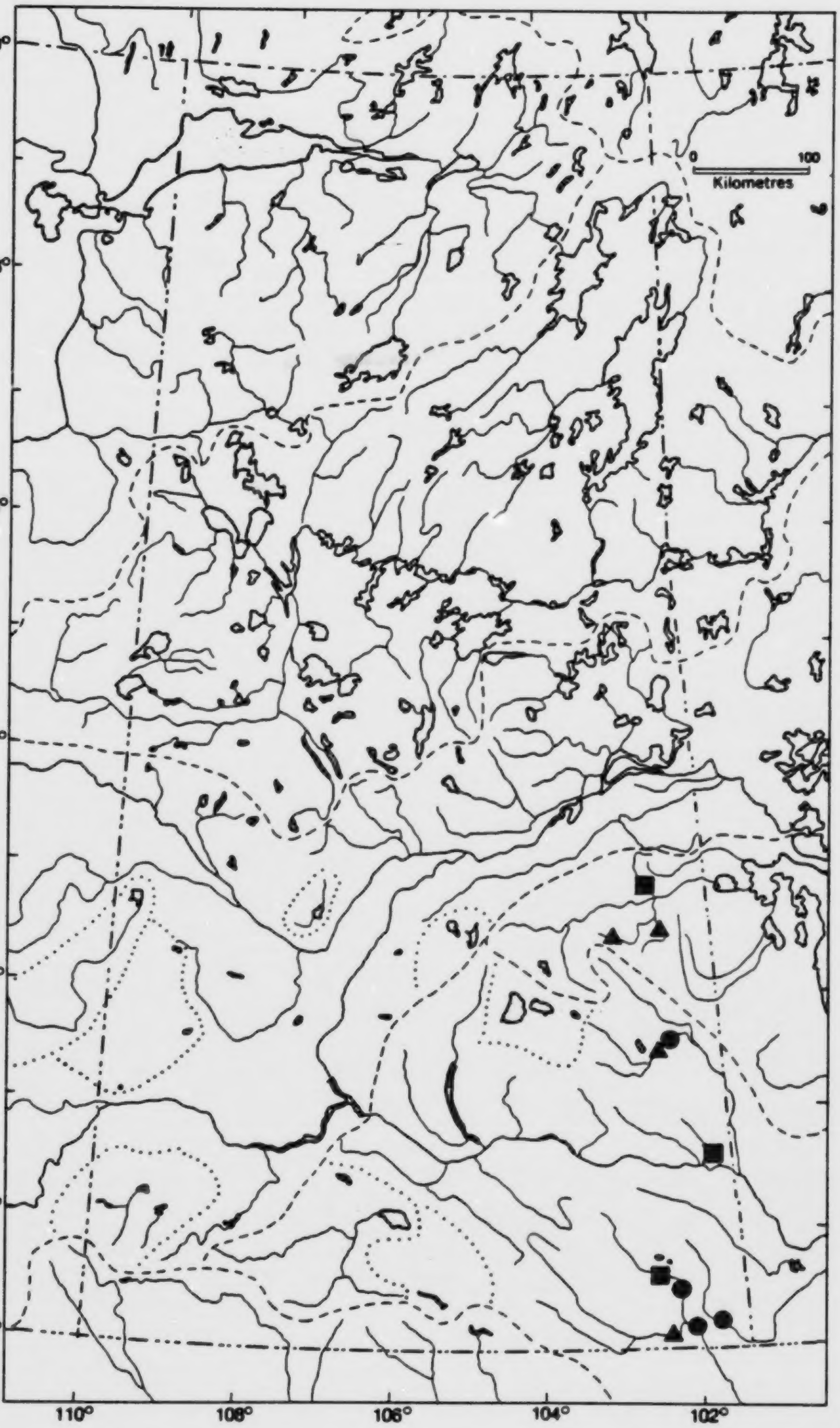
Map 26. Golden shiner, Notemigonus crysoleucas


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

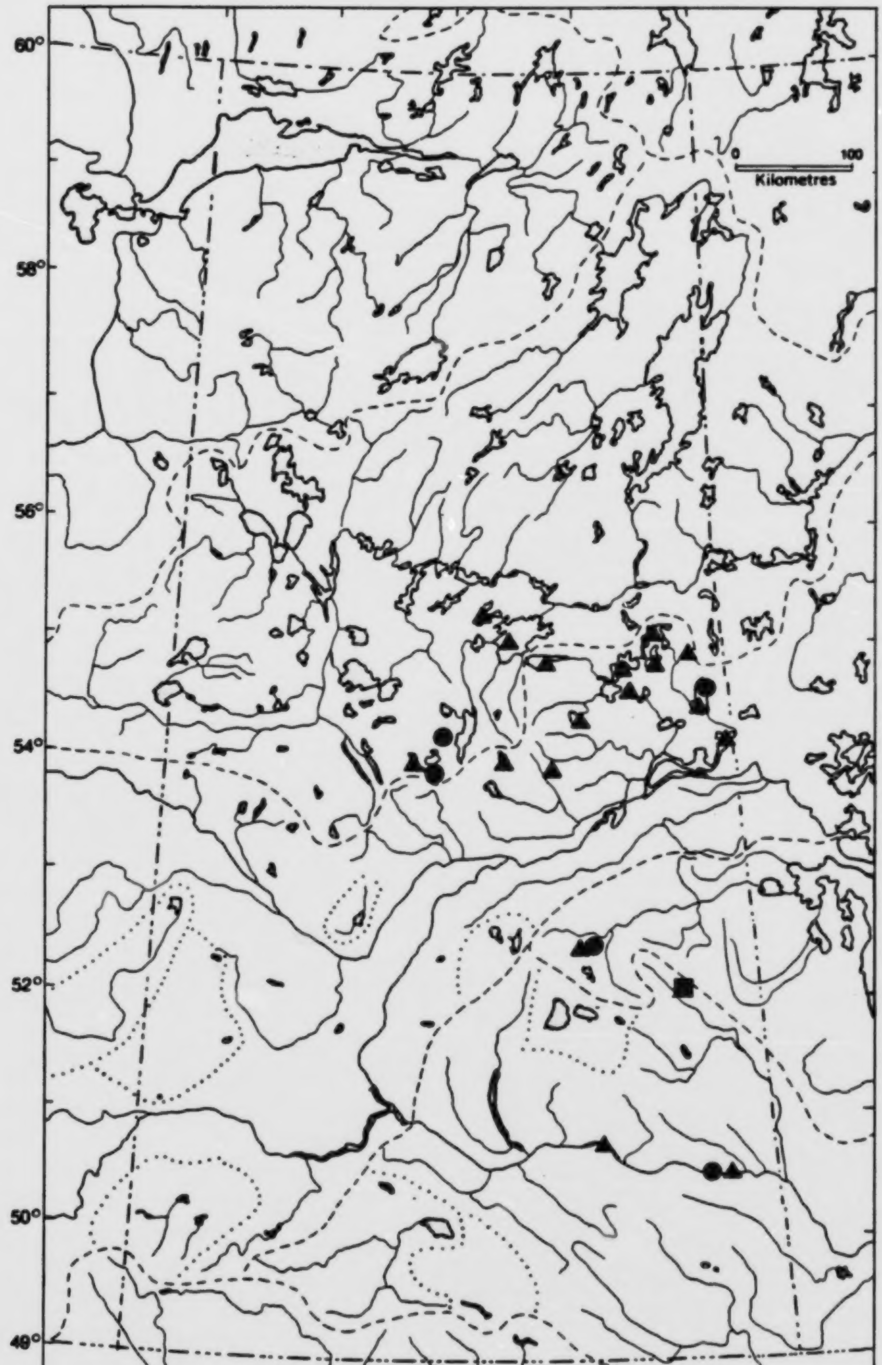
Map 27. Emerald shiner, Notropis atherinoides


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

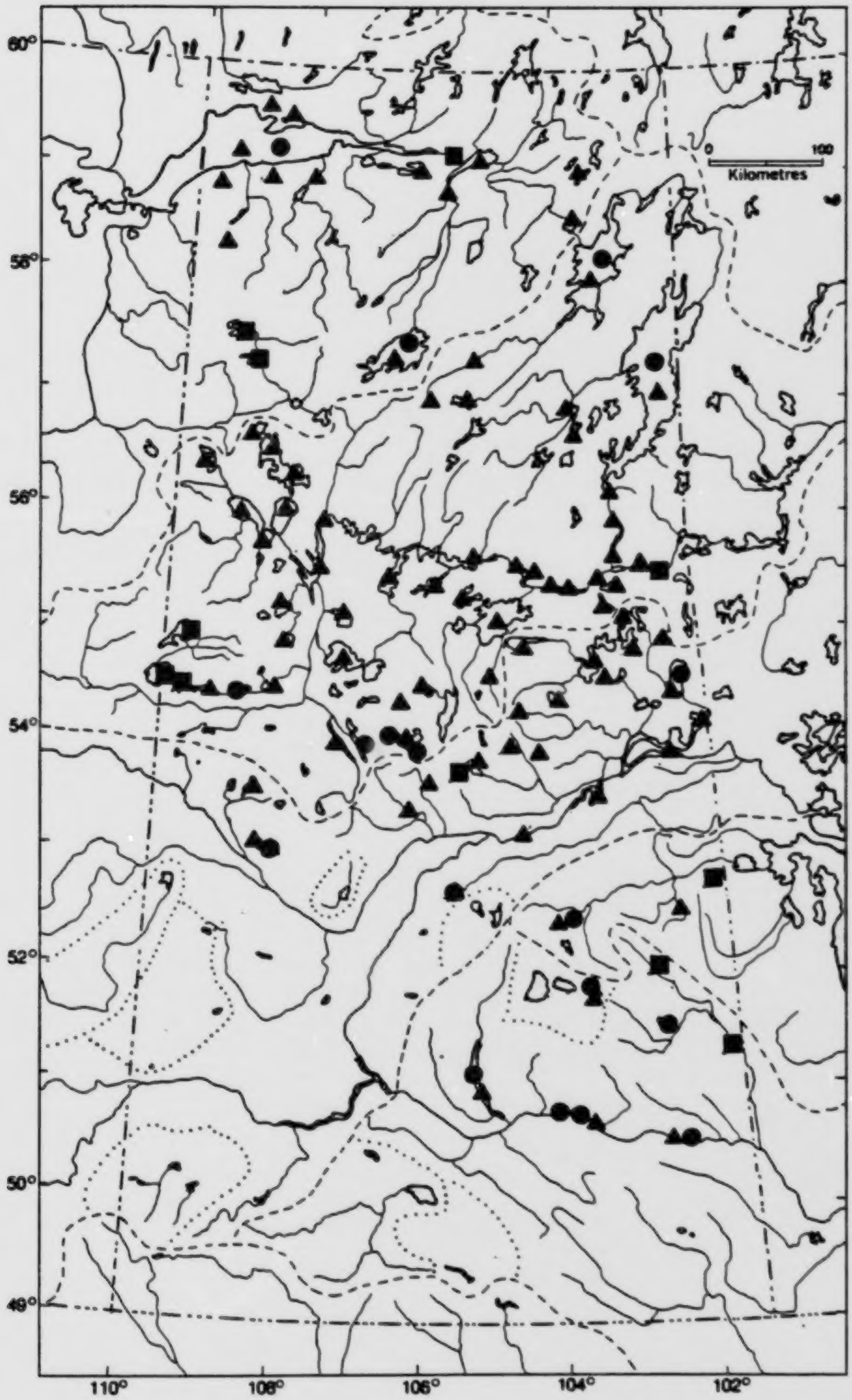
Map 28. River shiner, Notropis blennius


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

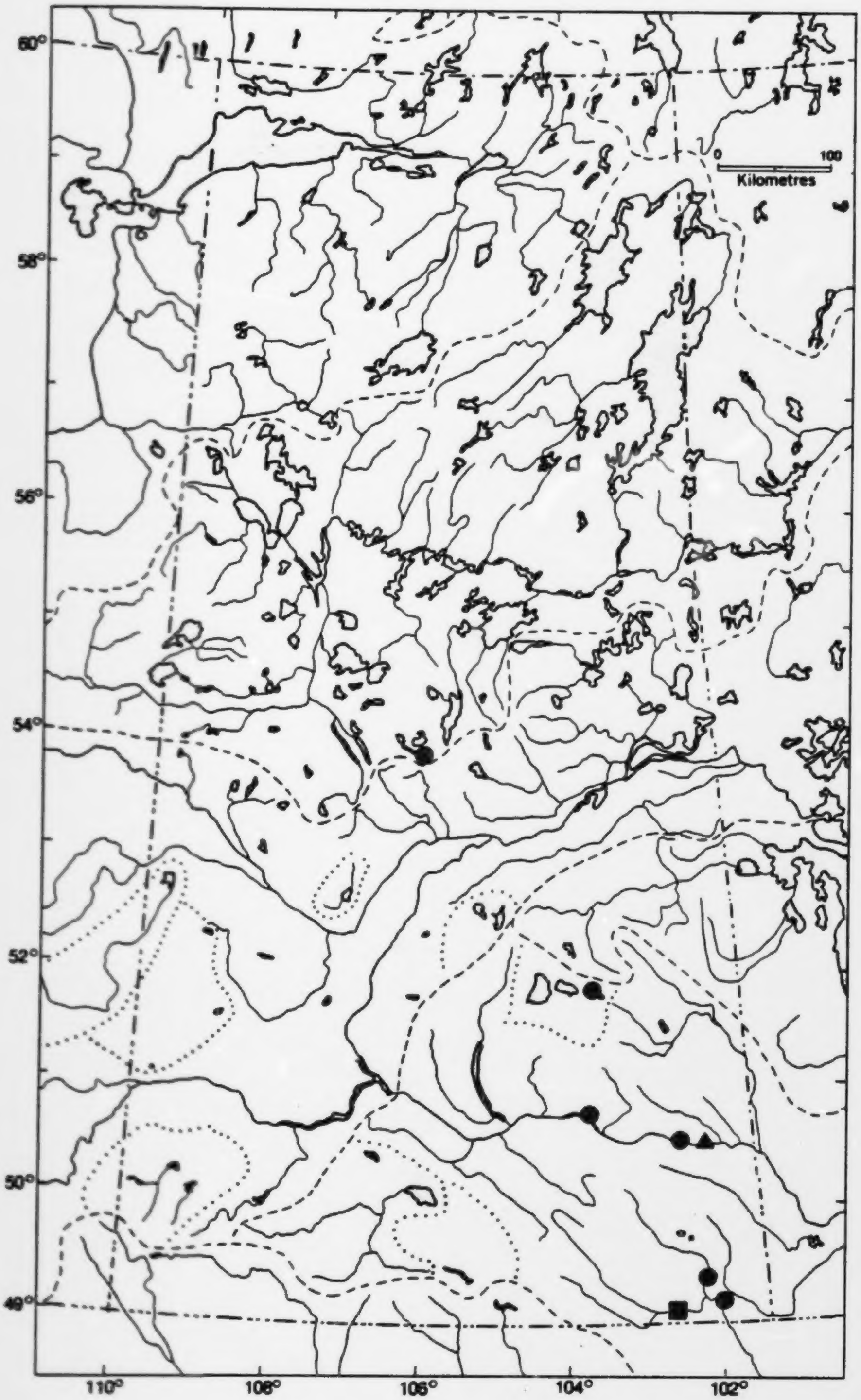
Map 29. Common shiner, Notropis cornutus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

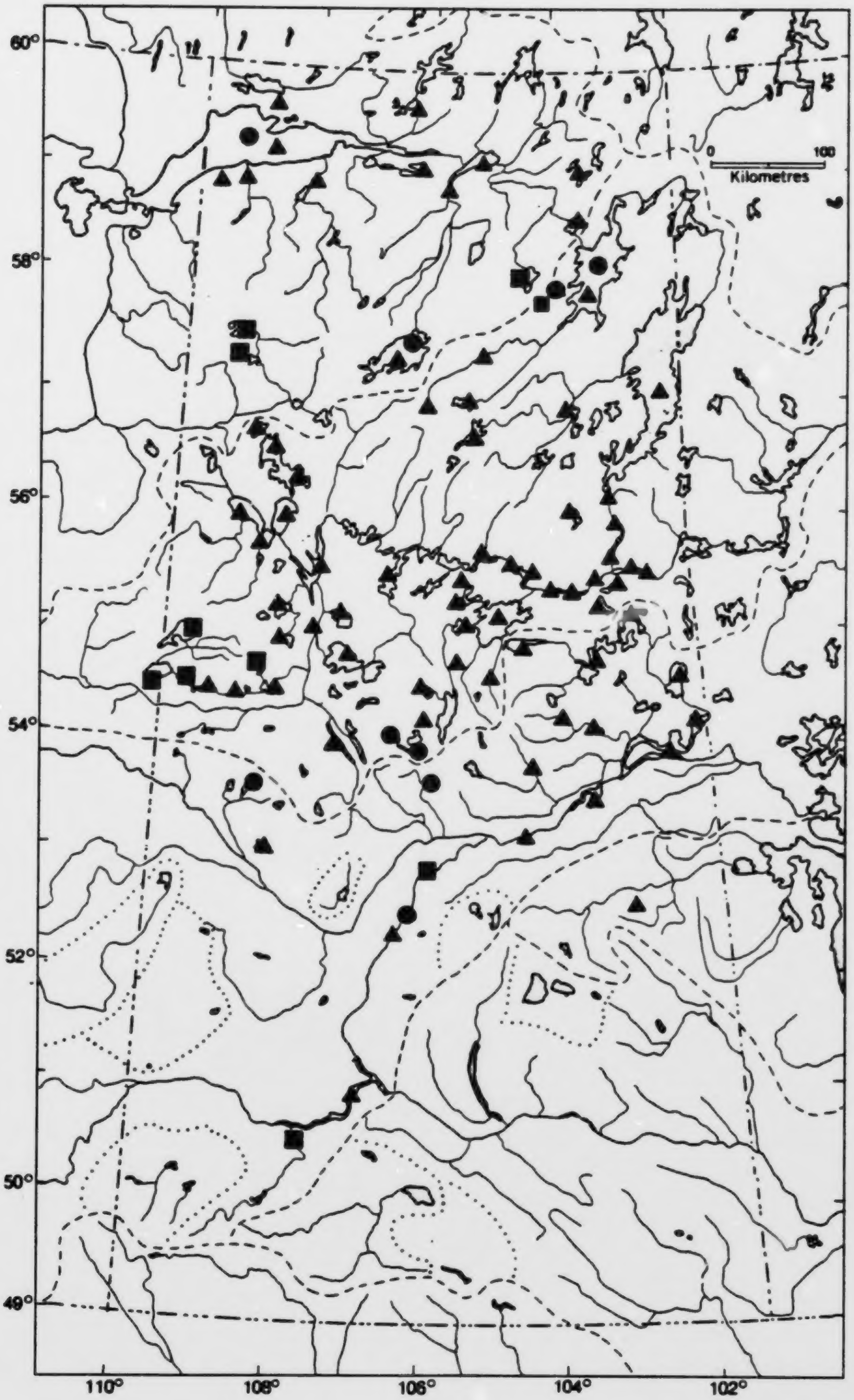
Map 30. Blacknose shiner, *Notropis heterolepis*


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

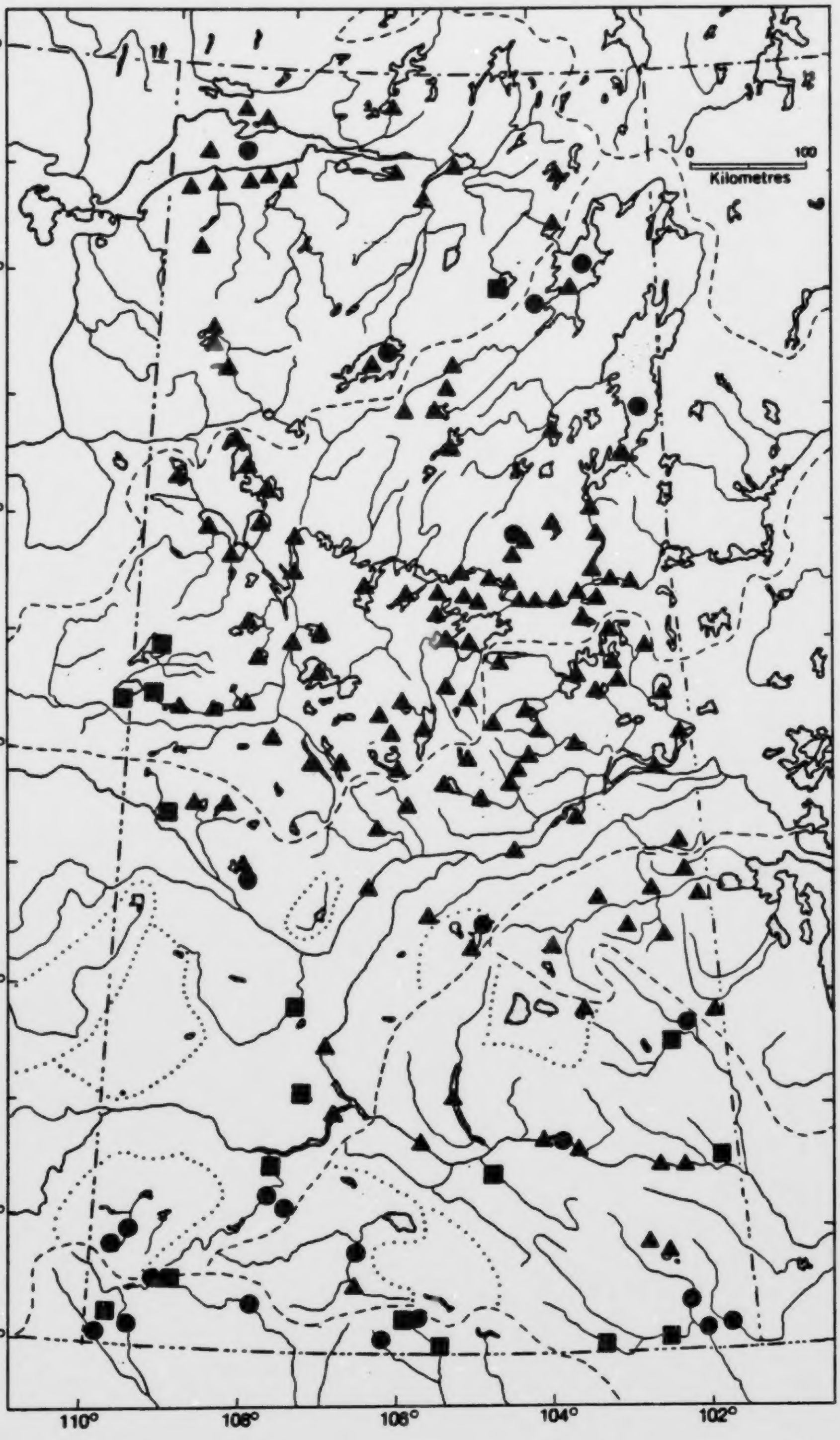
Map 31. Spottail shiner, Notropis hudsonius


60°
58°
56°
54°
52°
50°
49°
0
100
Kilometres
110°
108°
106°
104°
102°

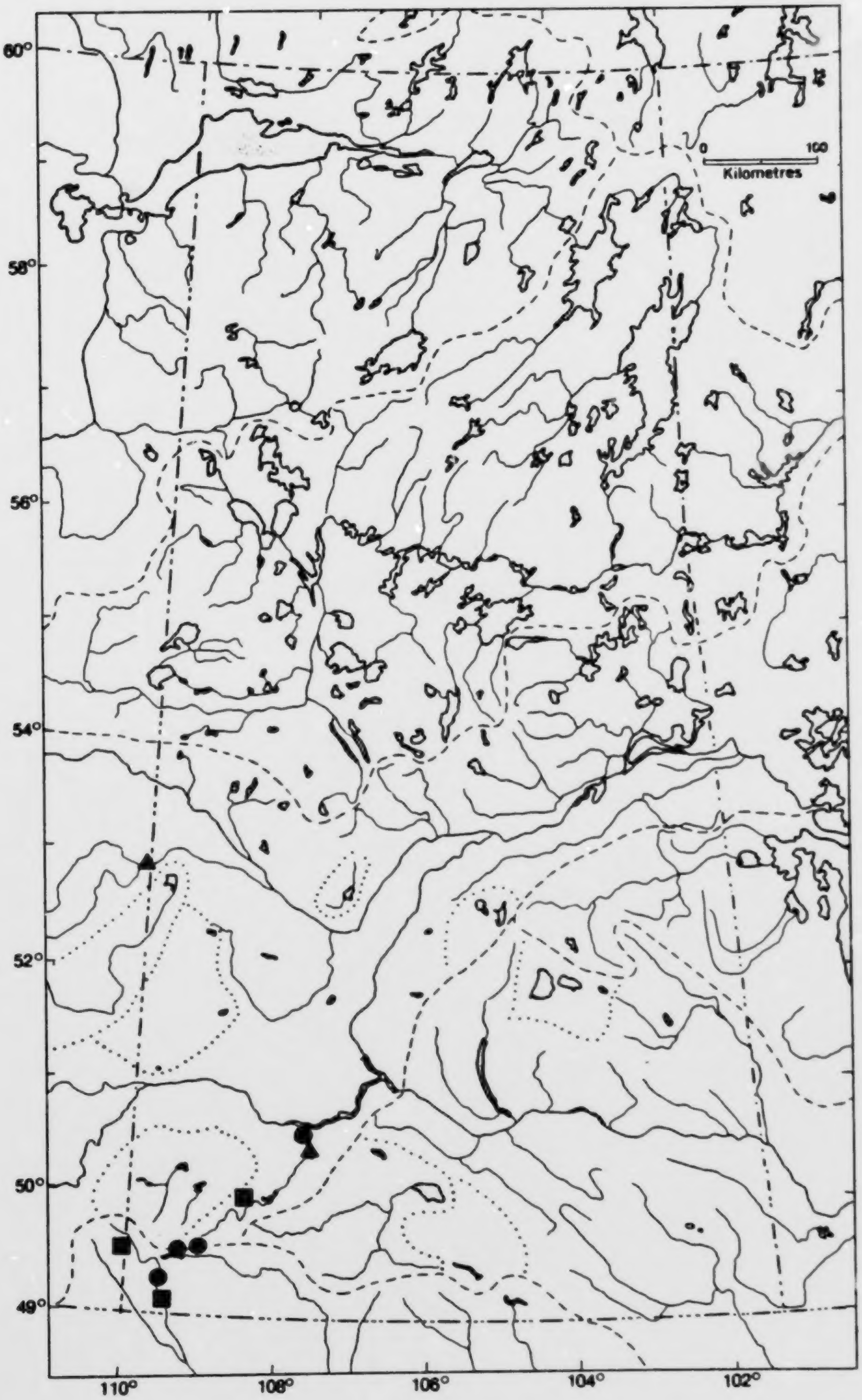
Map 32. Sand shiner, Notropis stramineus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 33. Longnose sucker, Catostomus catostomus

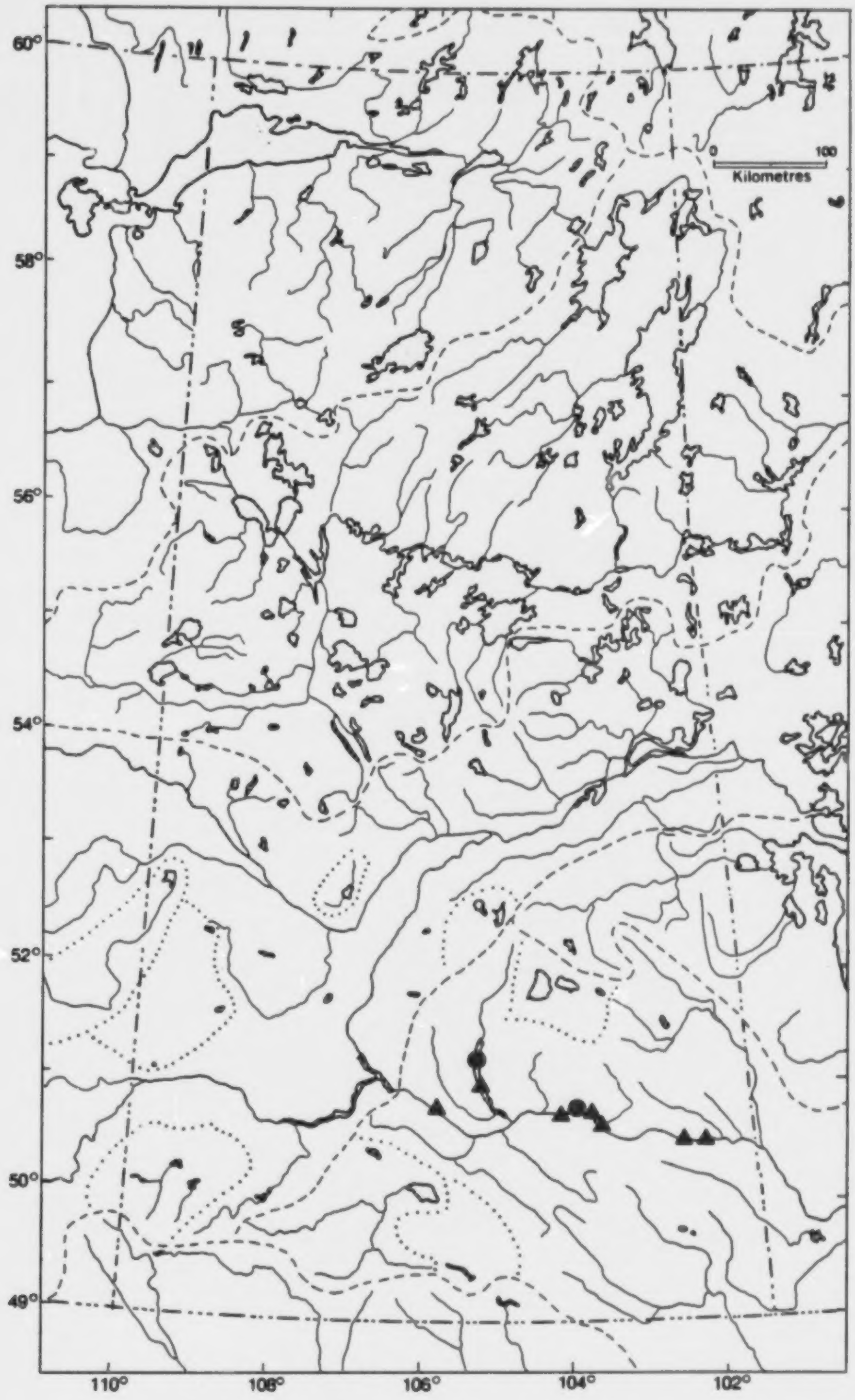

60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 34. White sucker, Catostomus commersoni

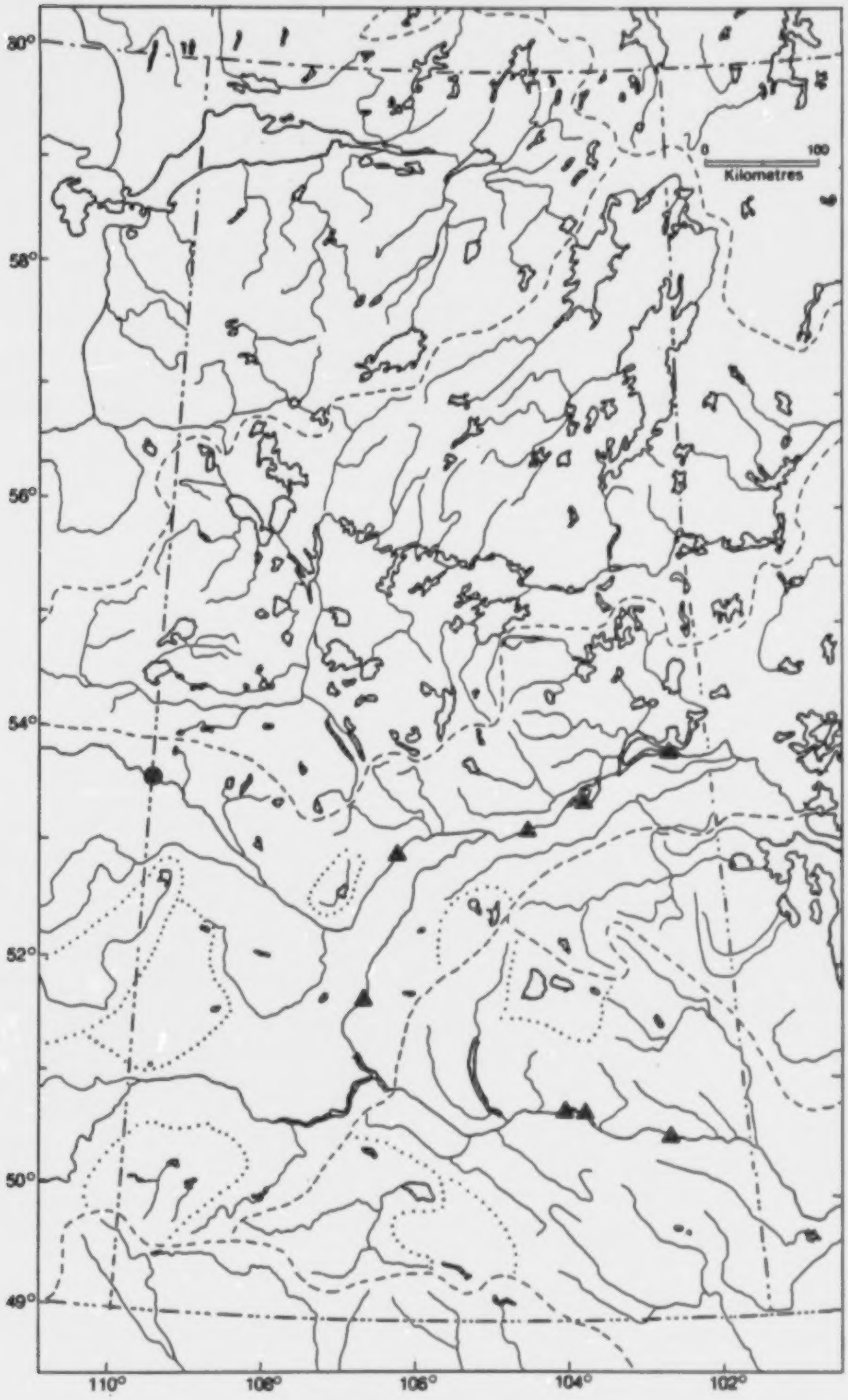


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

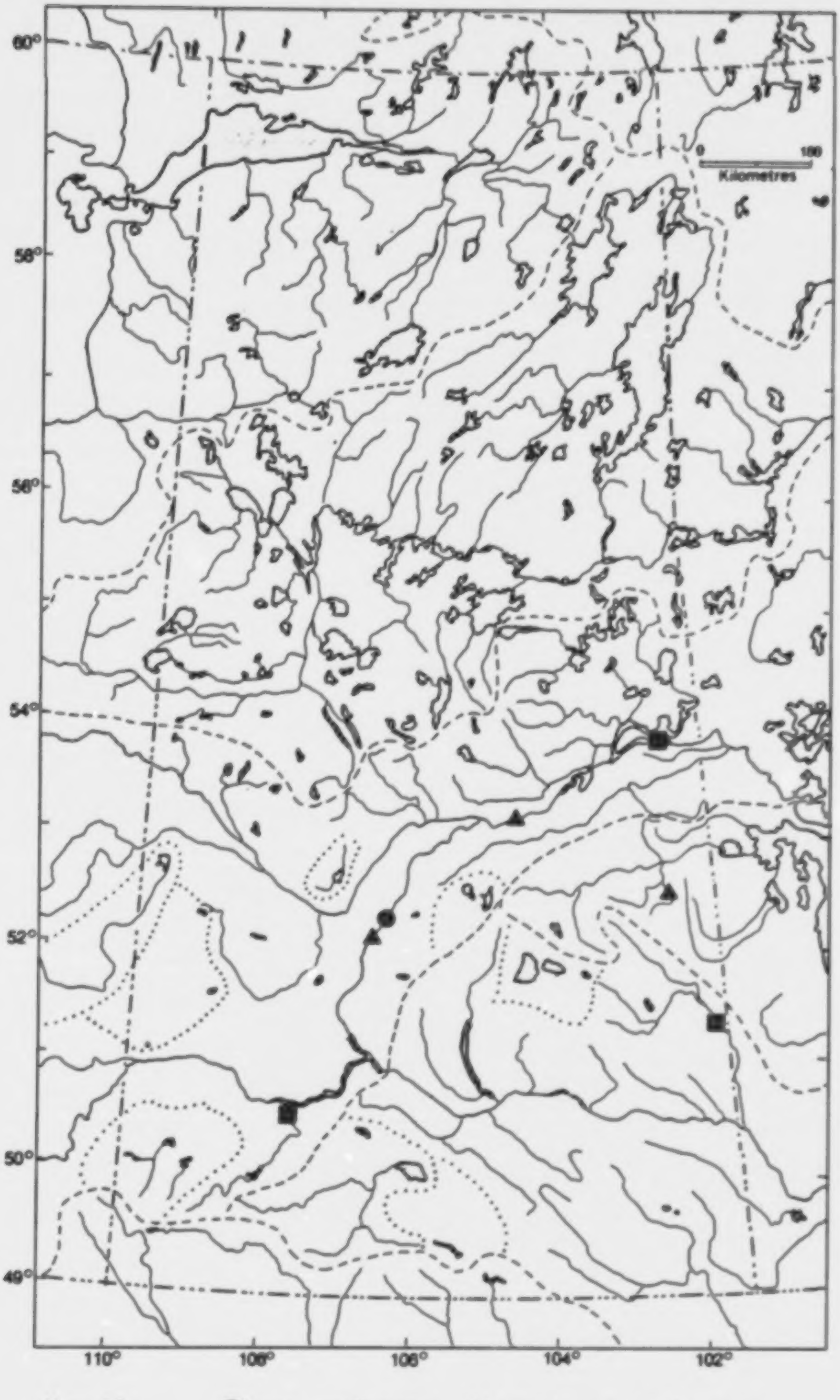
Map 35. Mountain sucker, Catostomus platyrhynchus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

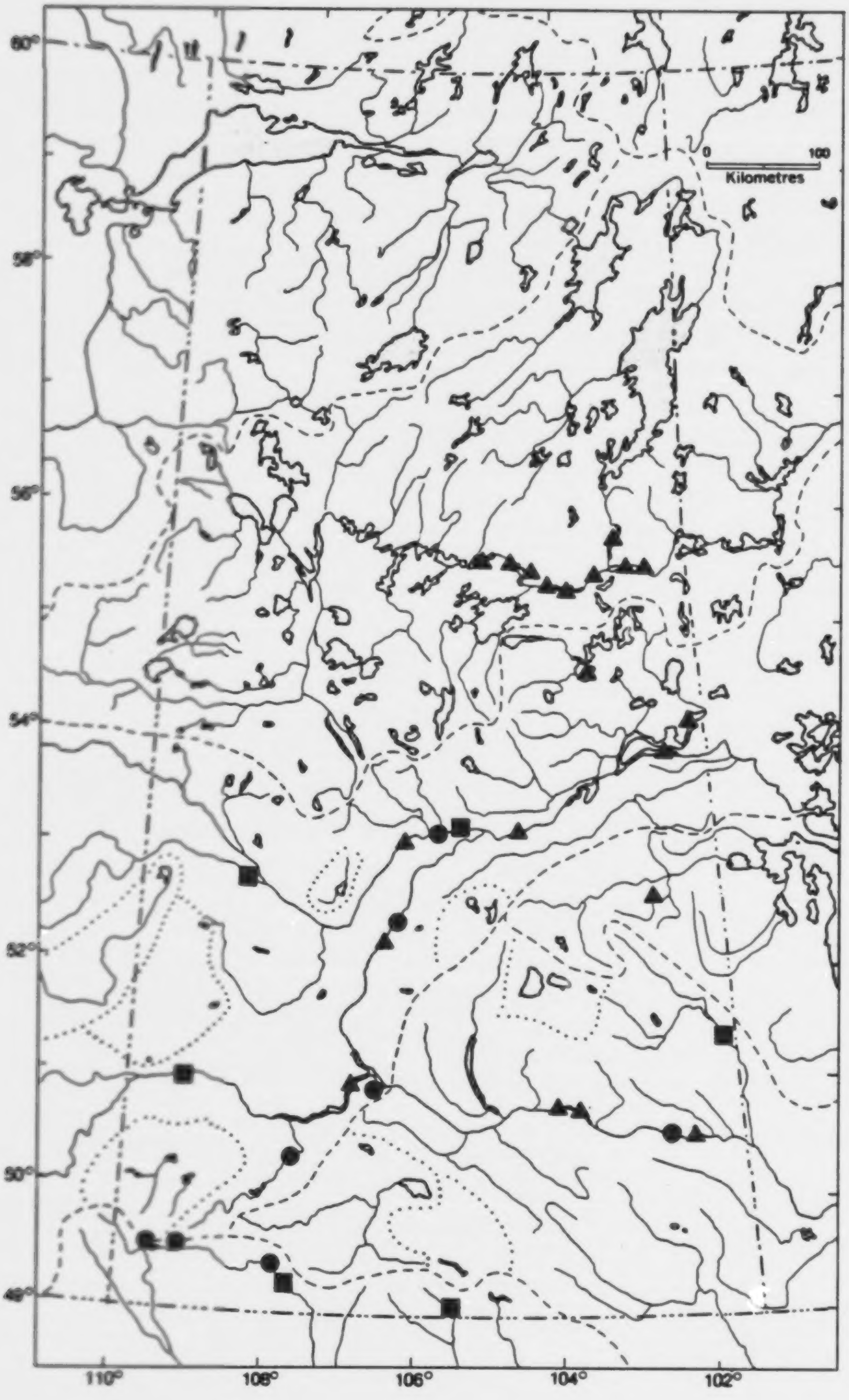
Map 36. Bigmouth buffalo, Ictiobus cyprinellus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

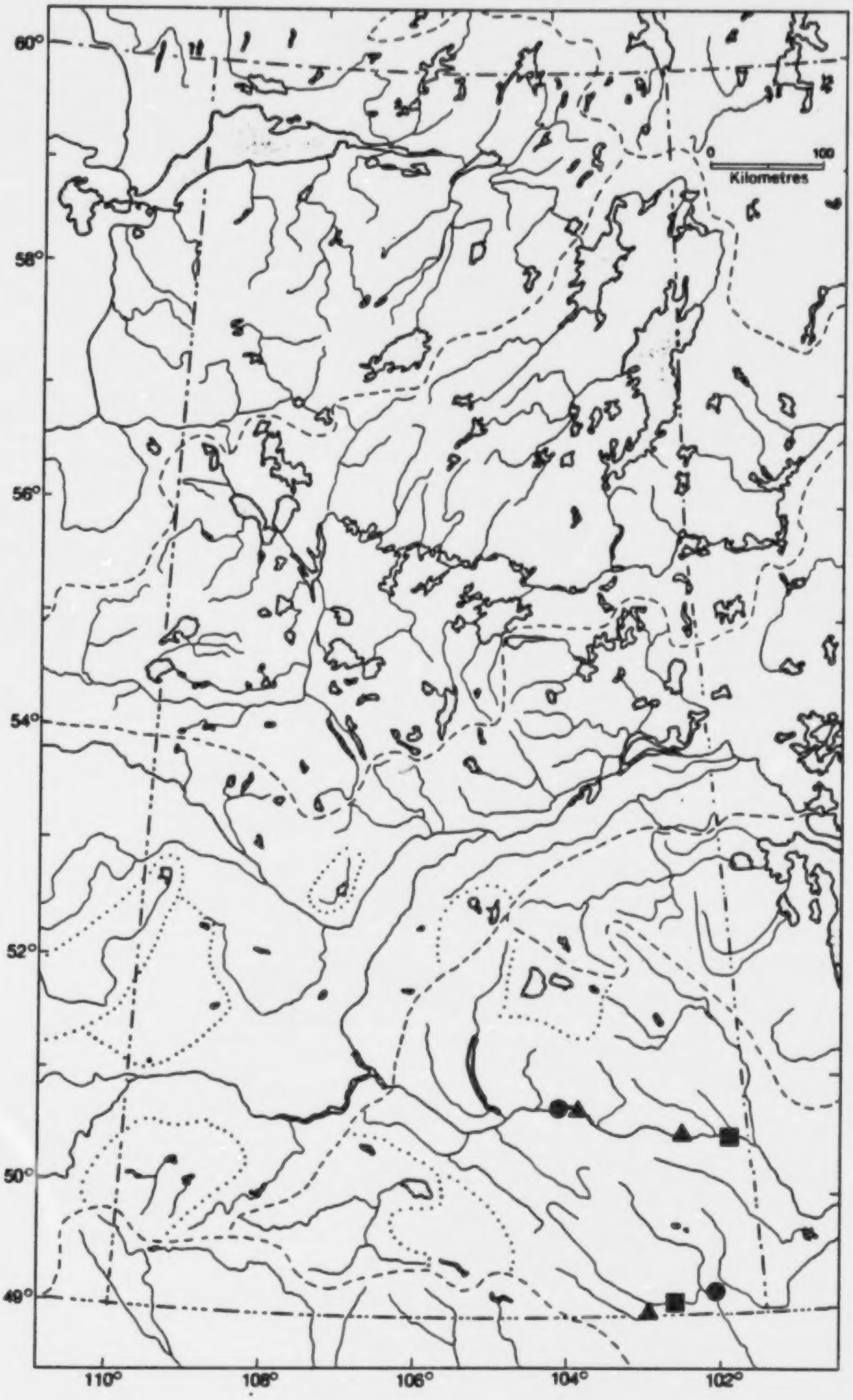
Map 37. Quillback, Carpiodes cyprinus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

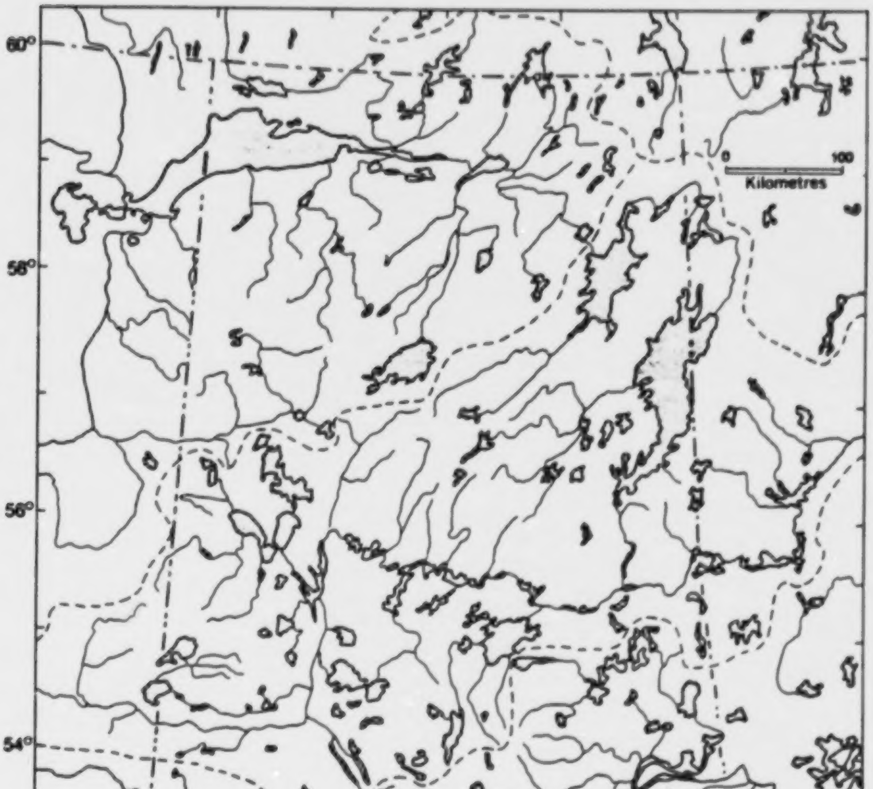
Map 38. Silver redhorse, Moxostoma anisurum


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

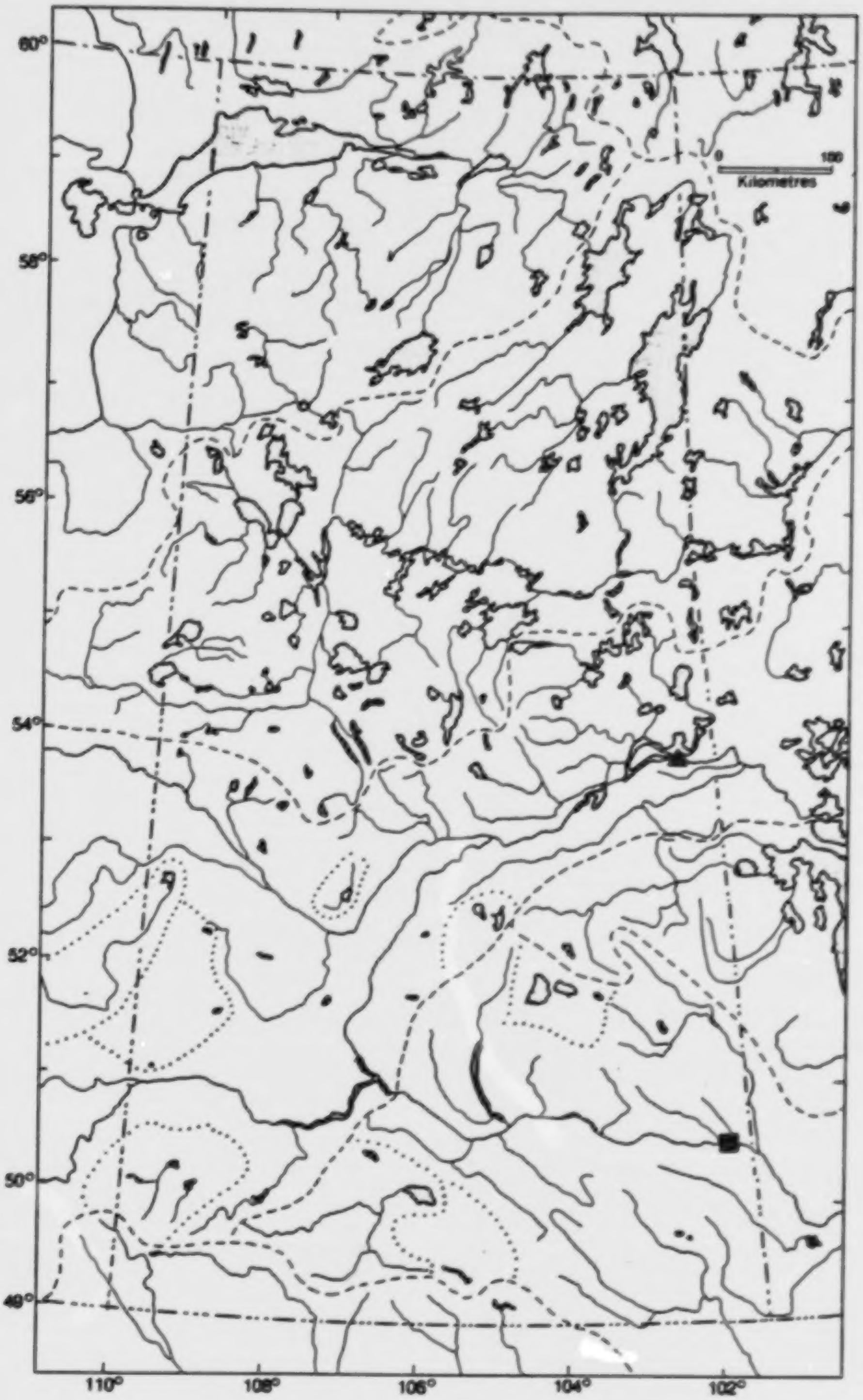
Map 39. Shorthead redhorse, Moxostoma macrolepidotum


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

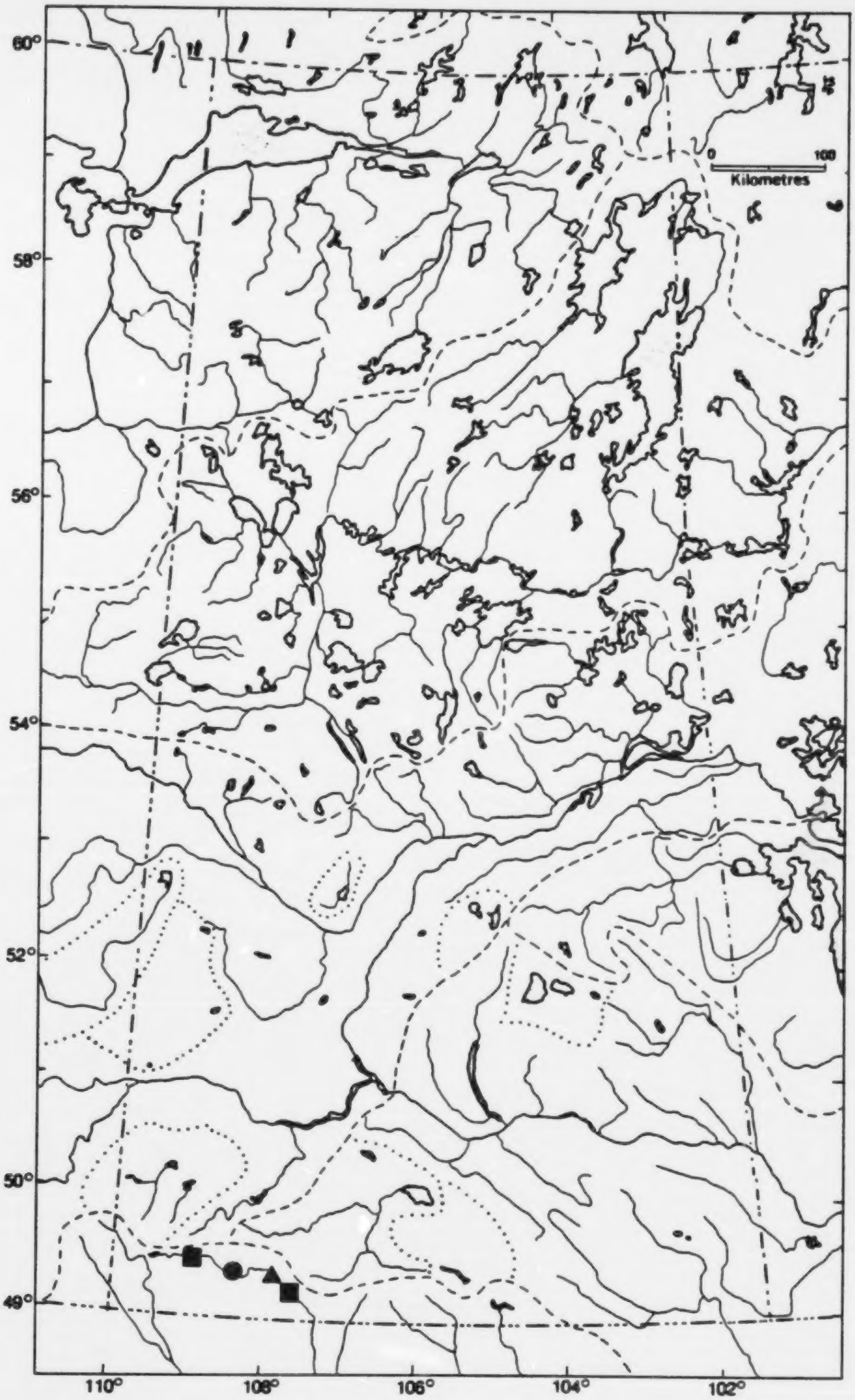
Map 40. Black bullhead, Ictalurus melas


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

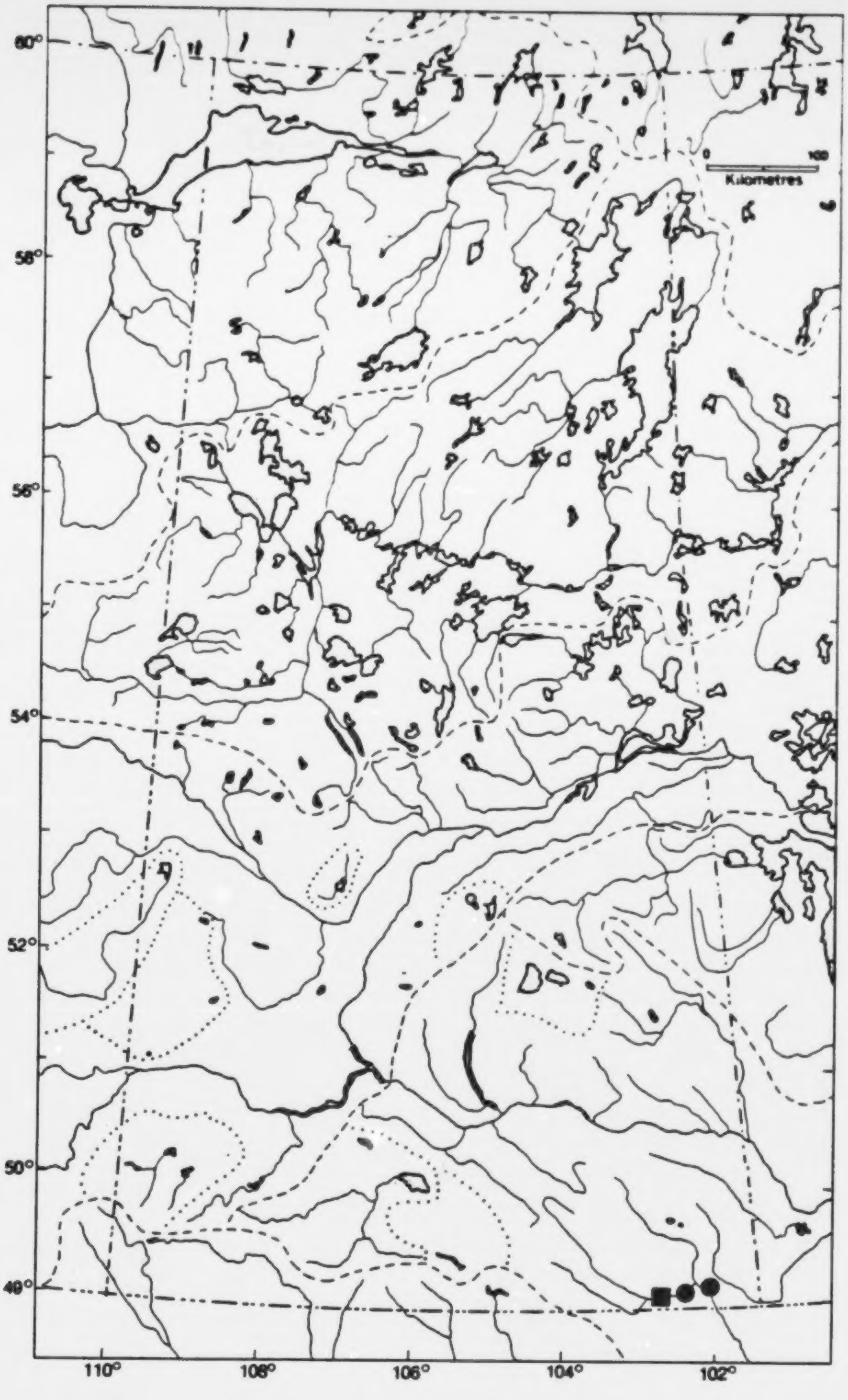
Map 41. Brown bullhead, Ictalurus nebulosus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

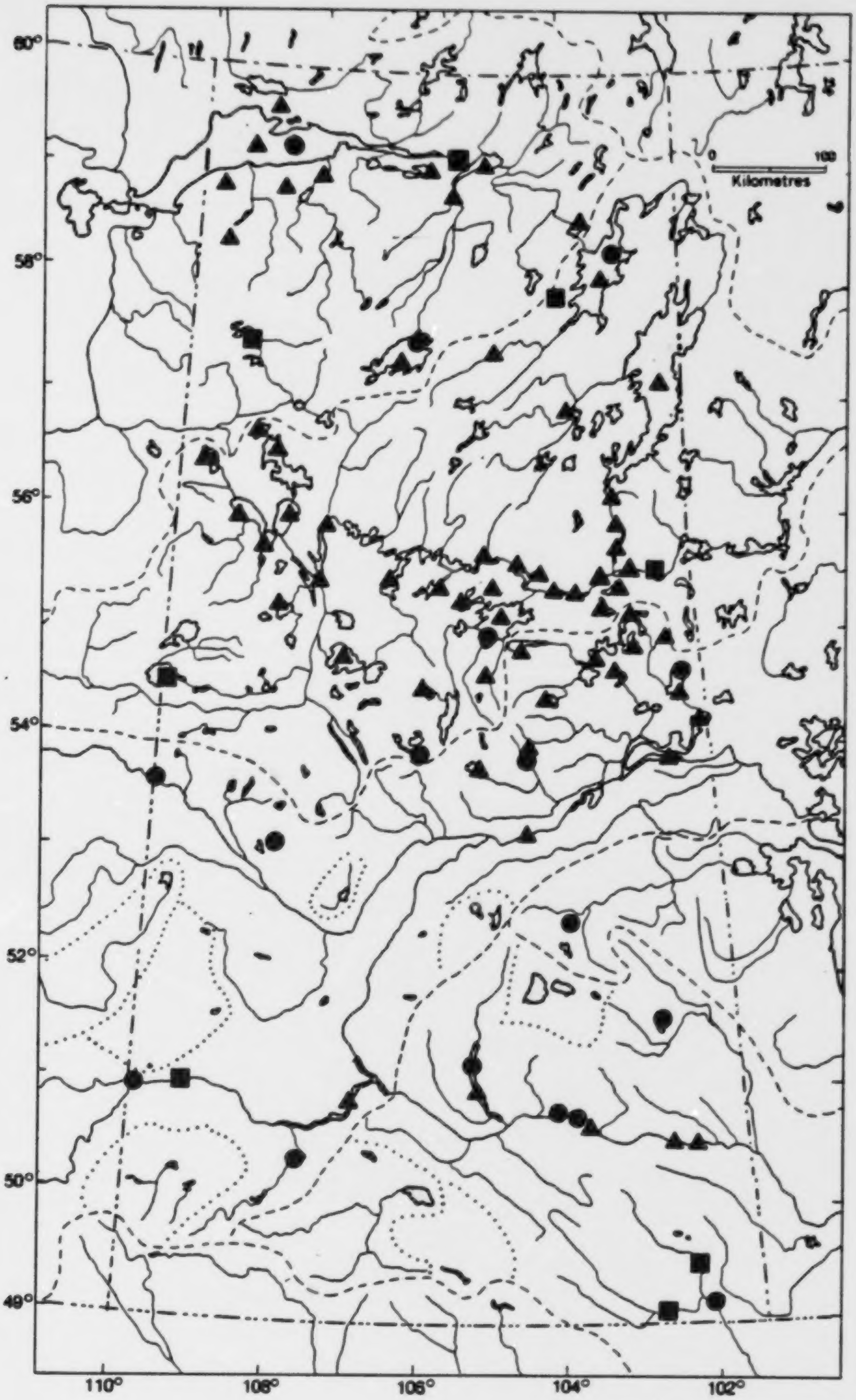
Map 42. Channel catfish, Ictalurus punctatus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

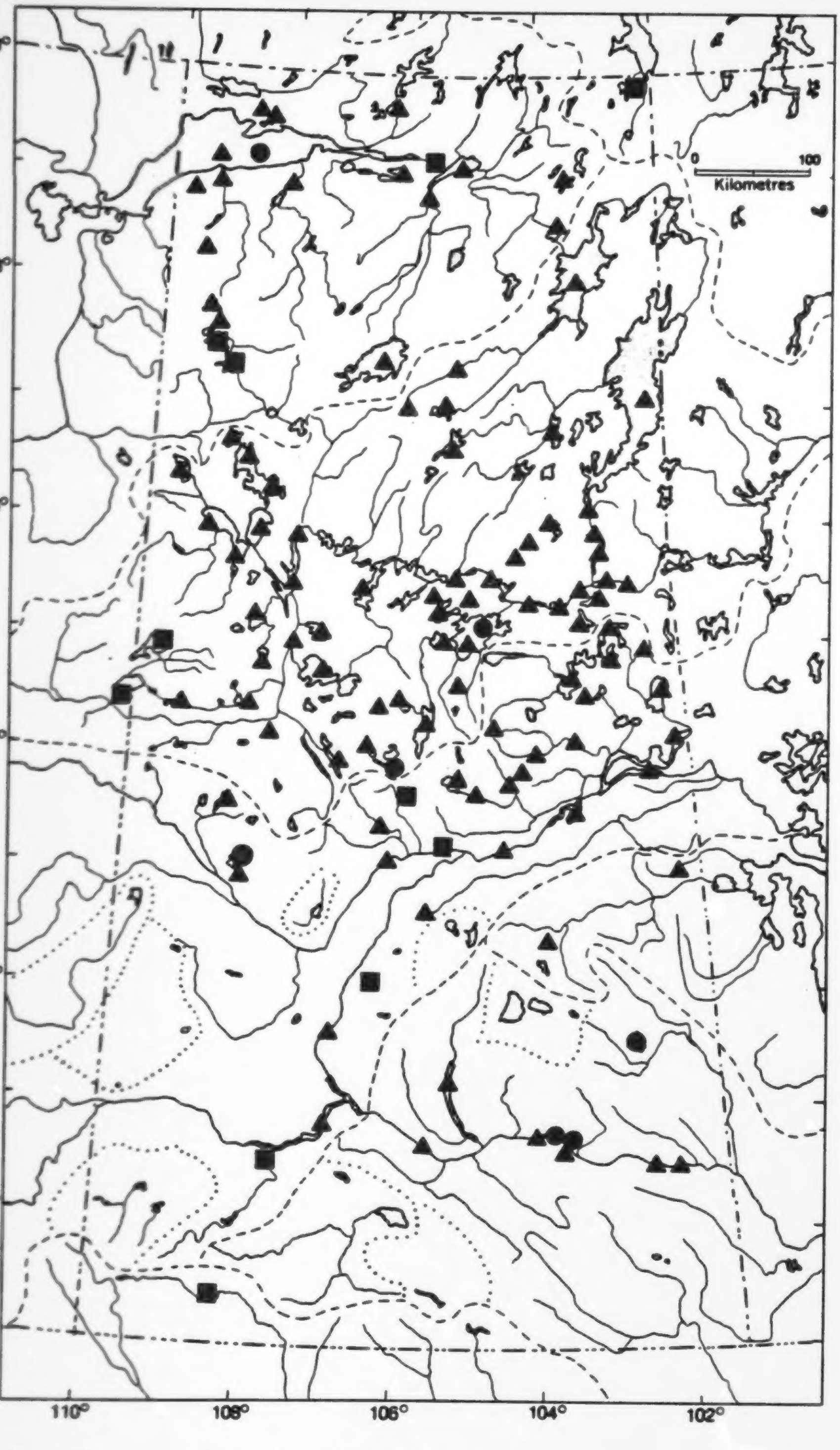
Map 43. Stonecat, _Noturus_ _flavus_


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 44. Tadpole madtom, Noturus gyrinus

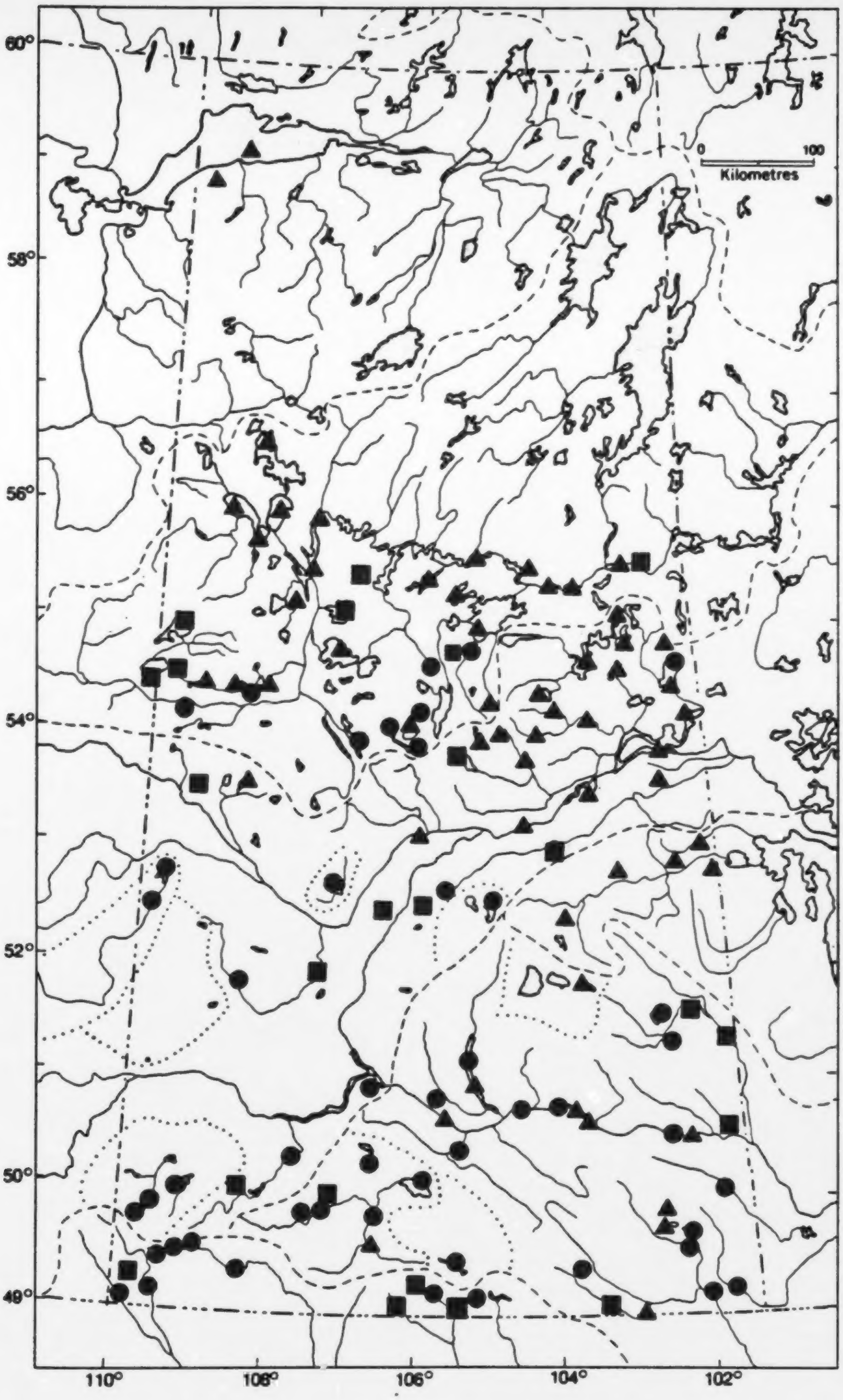

60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 45. Trout - perch, Percopsis omiscomaycus

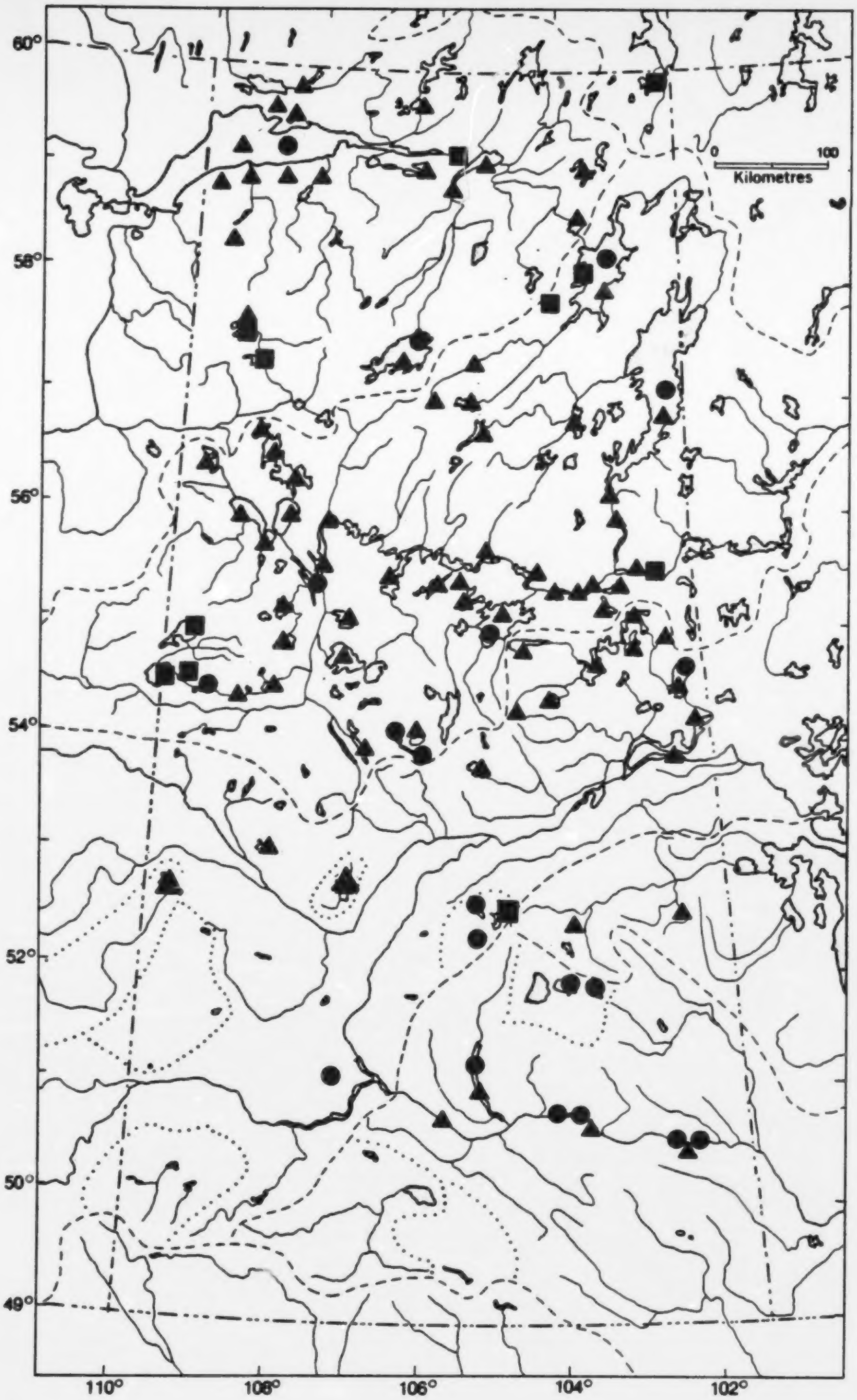


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

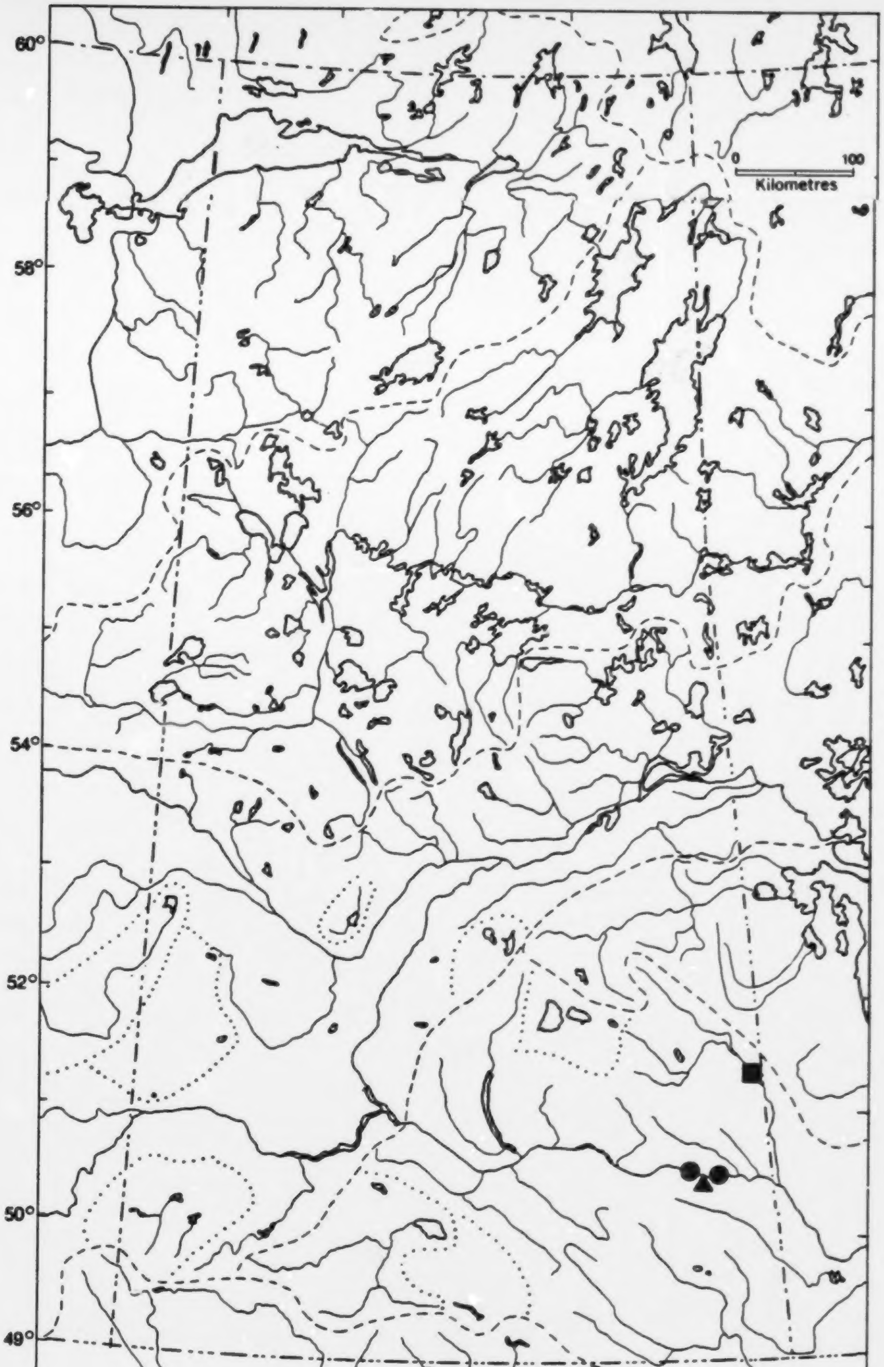
Map 46. Burbot, Lota lota


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

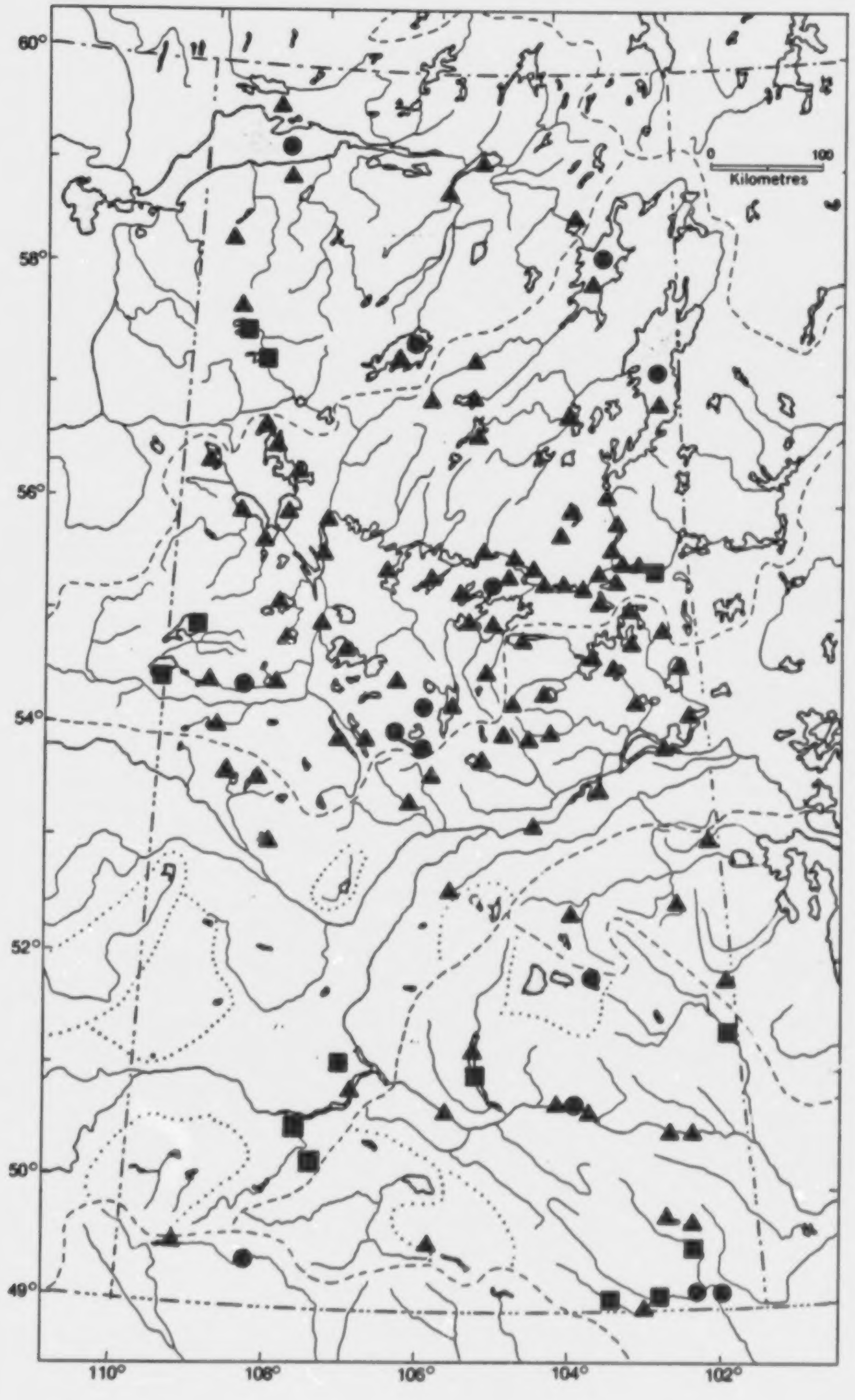
Map 47. Brook stickleback, Culaea inconstans


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

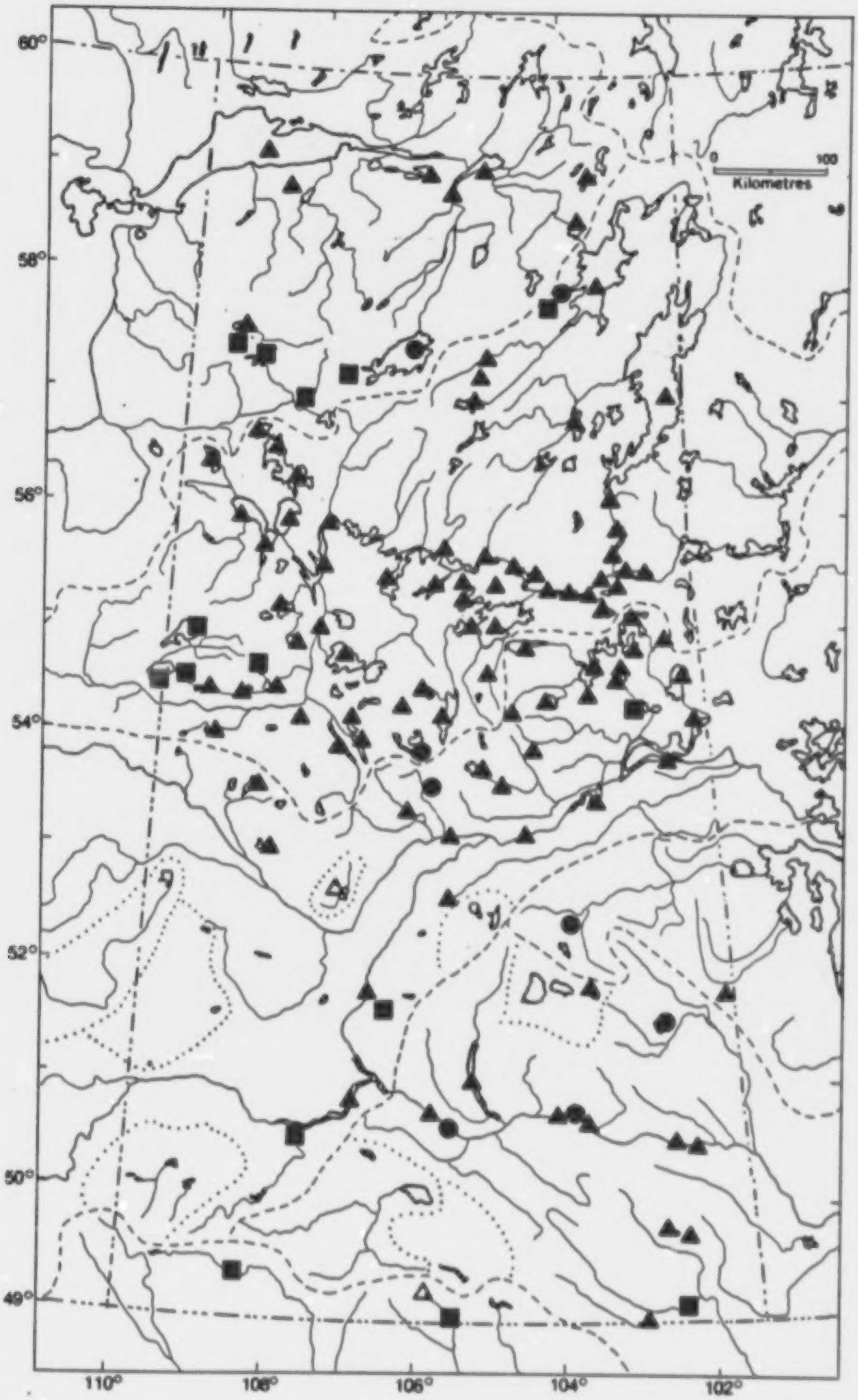
Map 48. Ninespine stickleback, Pungitius pungitius


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

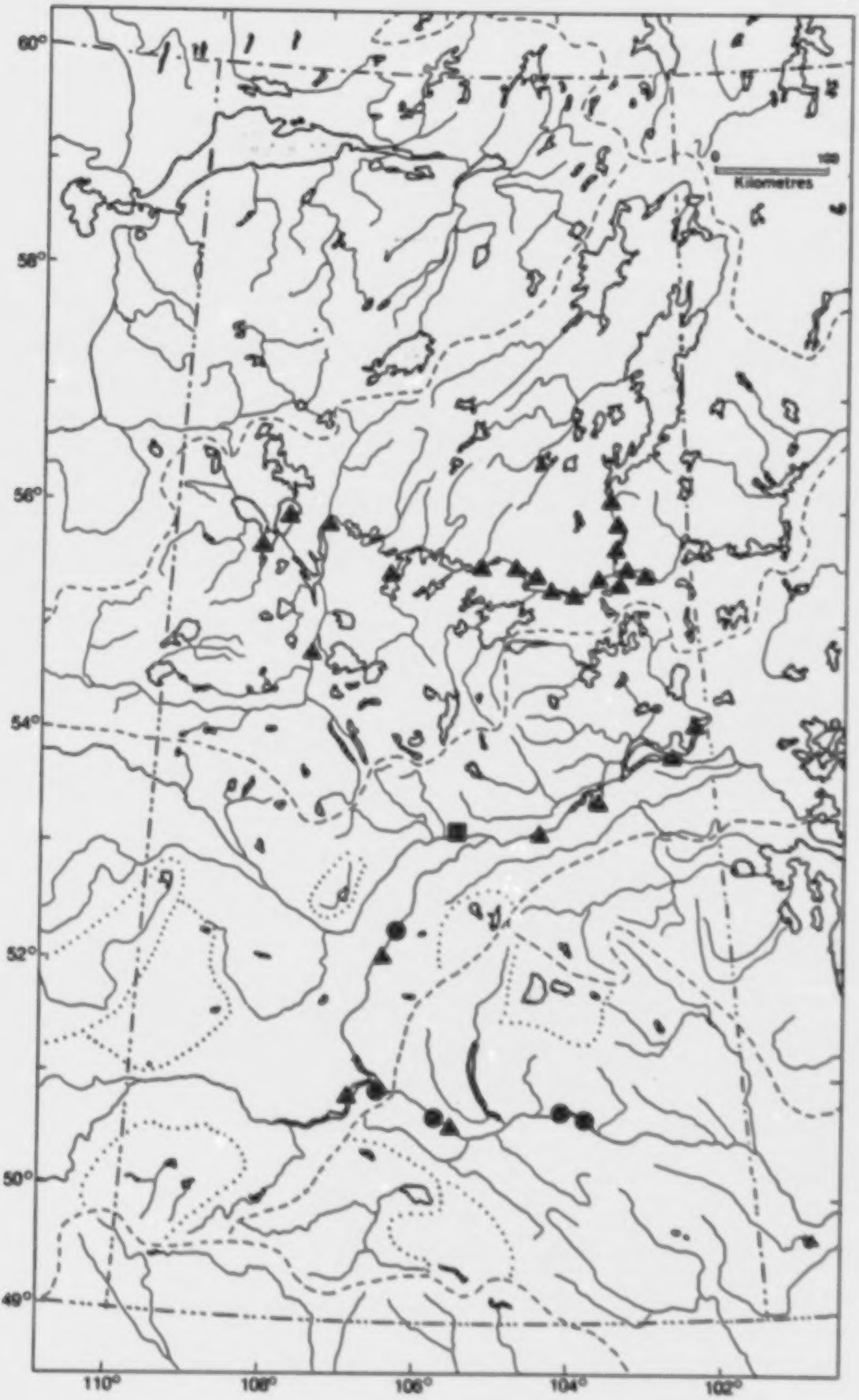
Map 49. Rock bass, Ambloplites rupestris


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

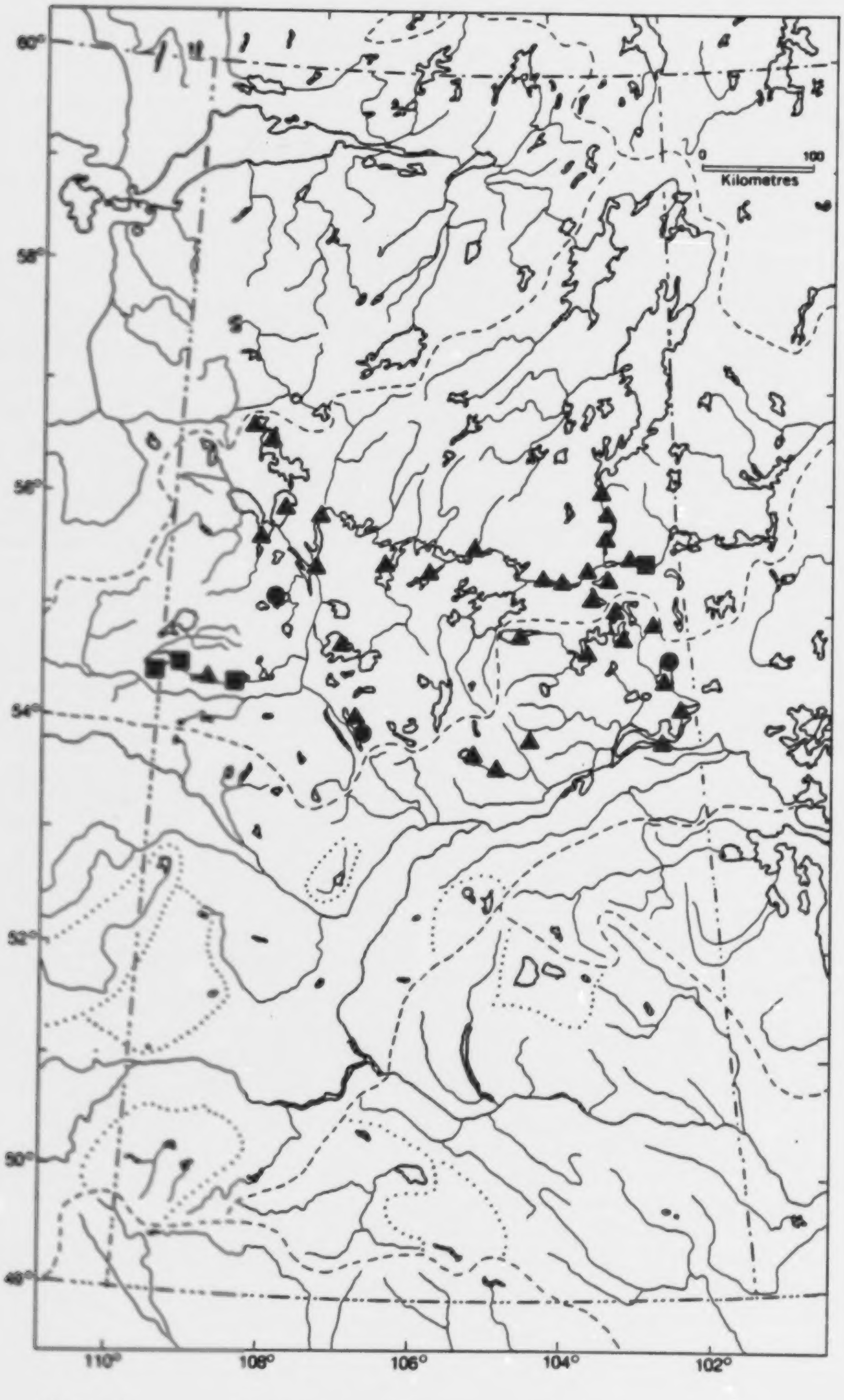
Map 50. Yellow perch, Perca flavescens


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

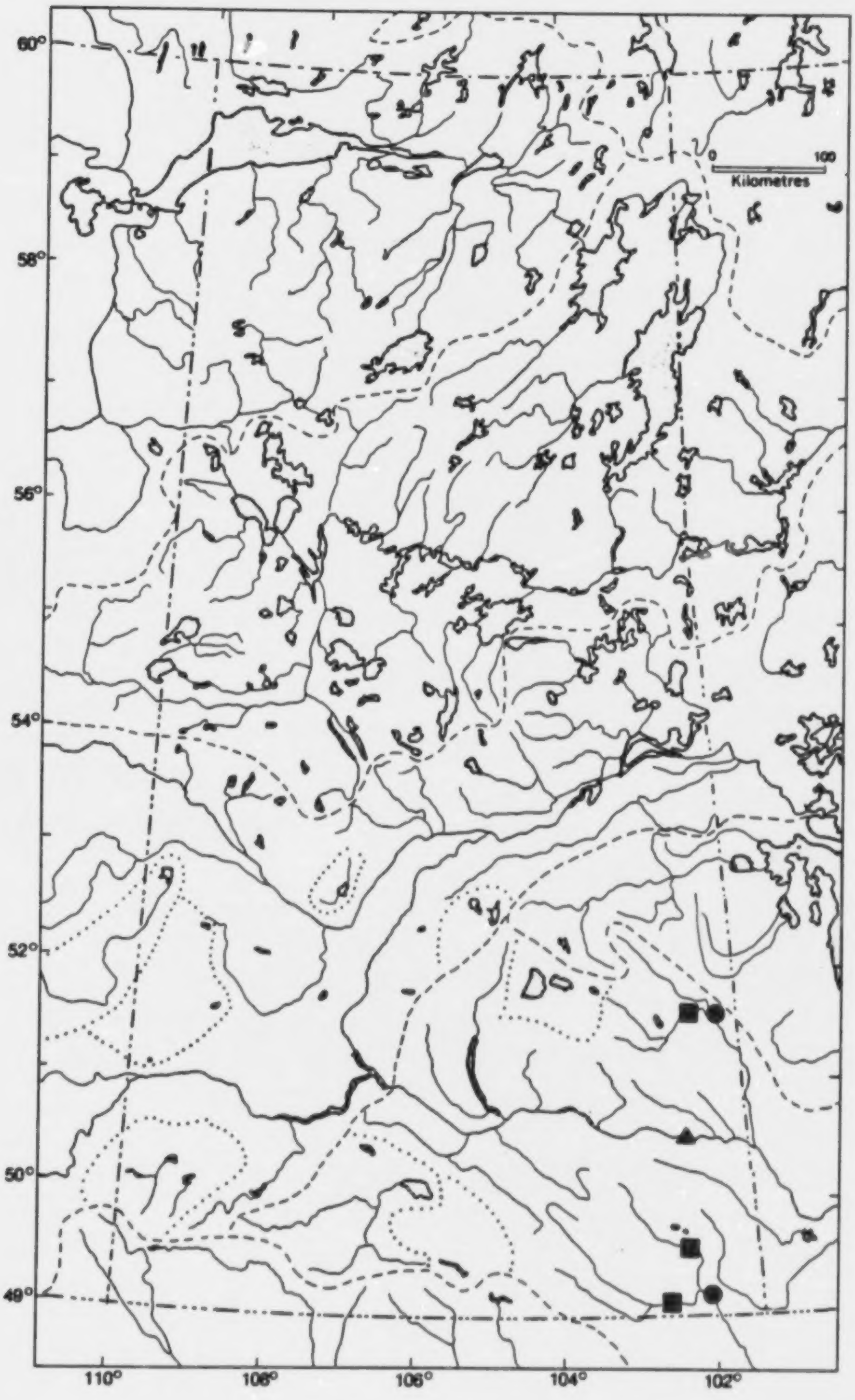
Map 51. Walleye, Stizostedion vitreum


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

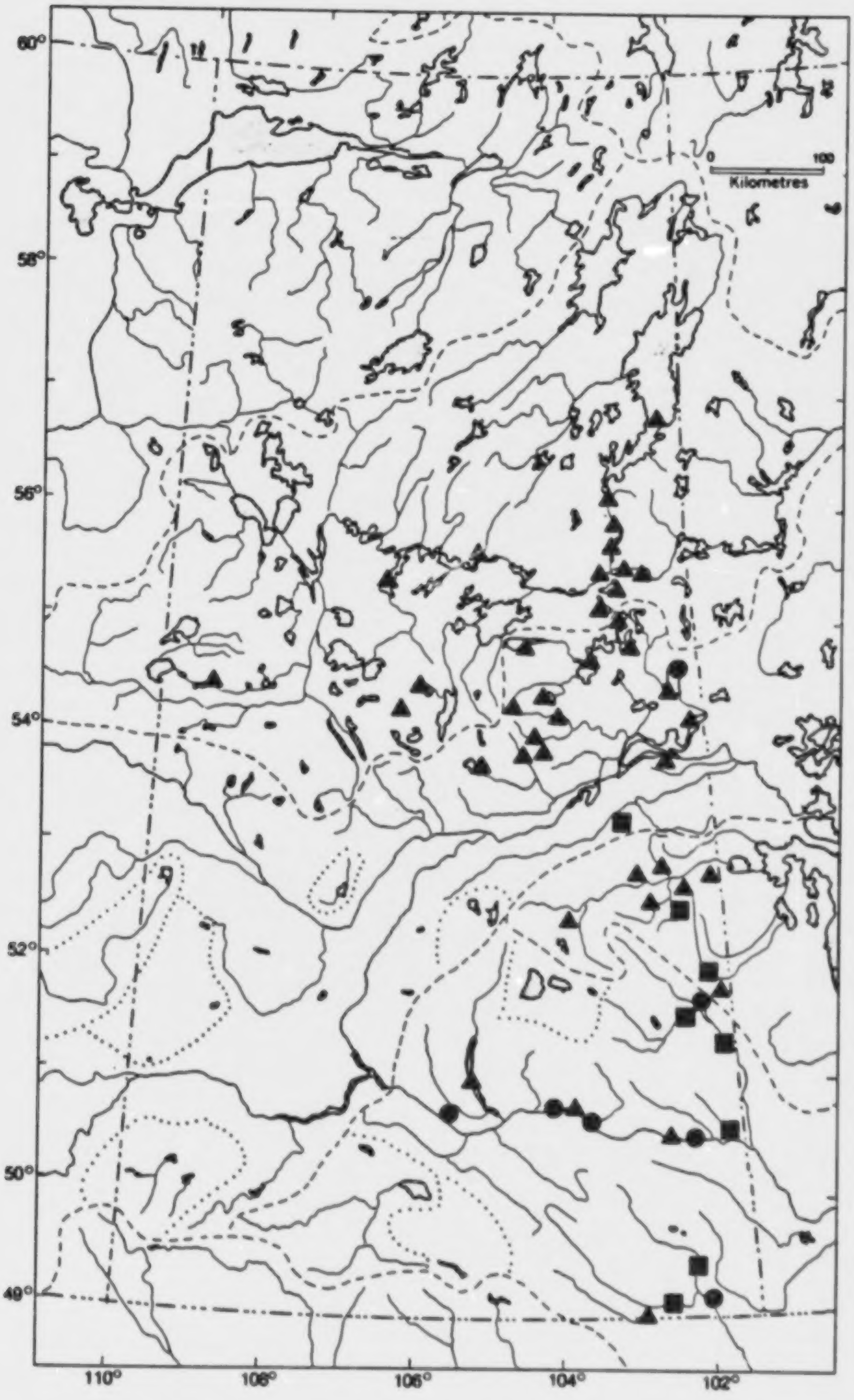
Map 52. Sauger, Stizostedion canadense


60°
58°
56°
54°
52°
50°
48°
0
100
Kilometres
110°
108°
106°
104°
102°

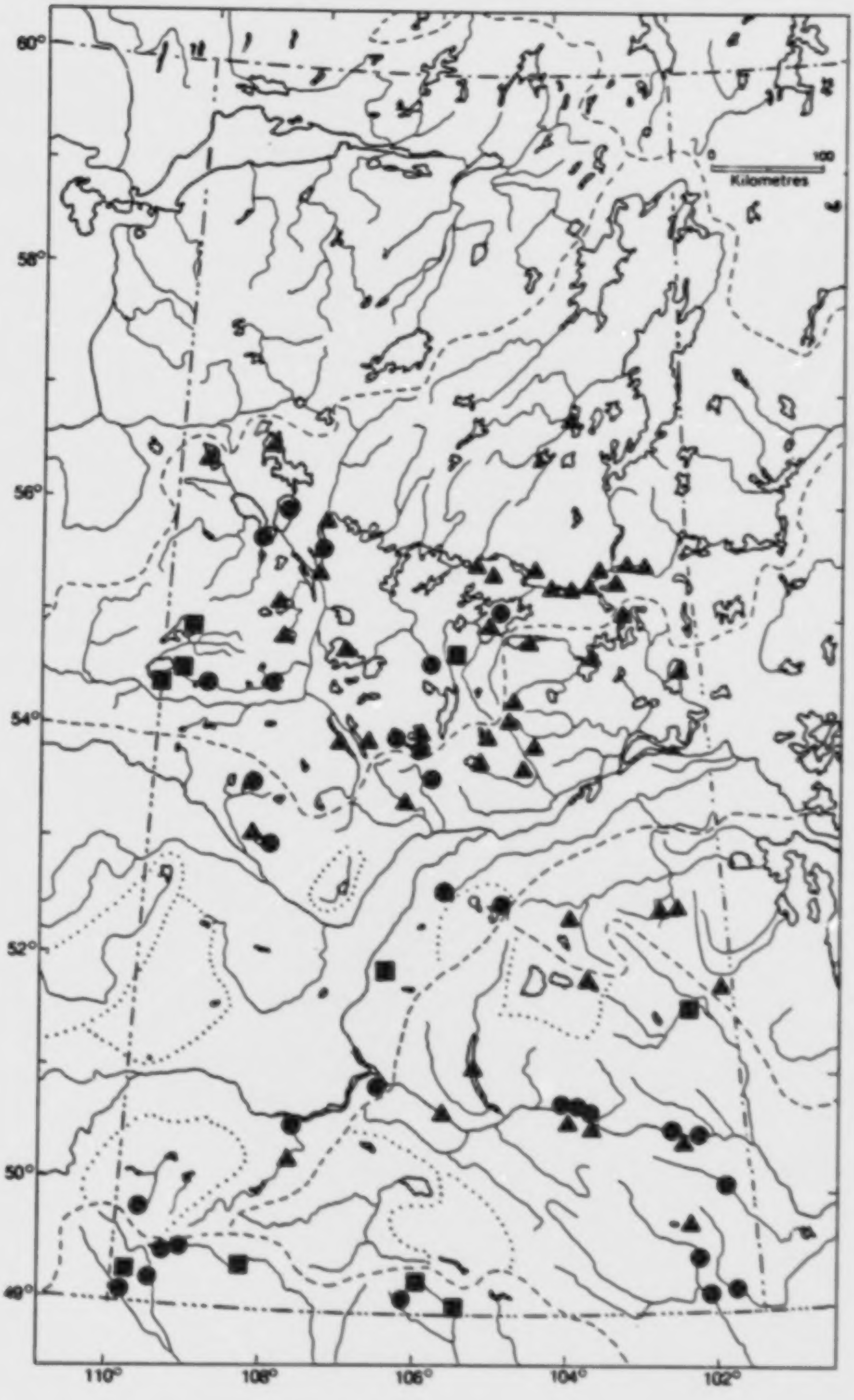
Map 53. Logperch, Percina caprodes


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

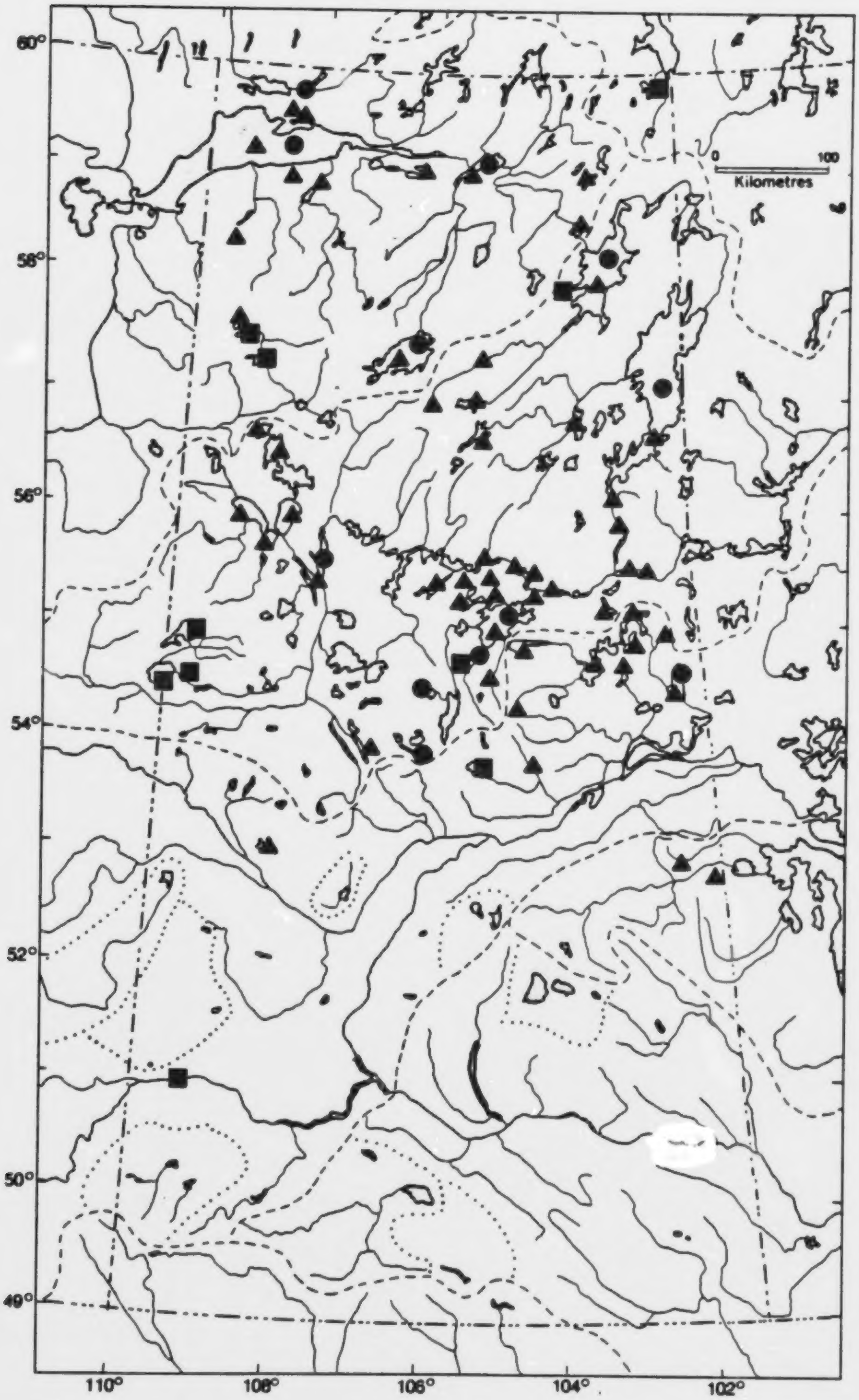
Map 54. Blackside darter, _Percina_ _maculata_


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 55. Johnny darter, Etheostoma nigrum

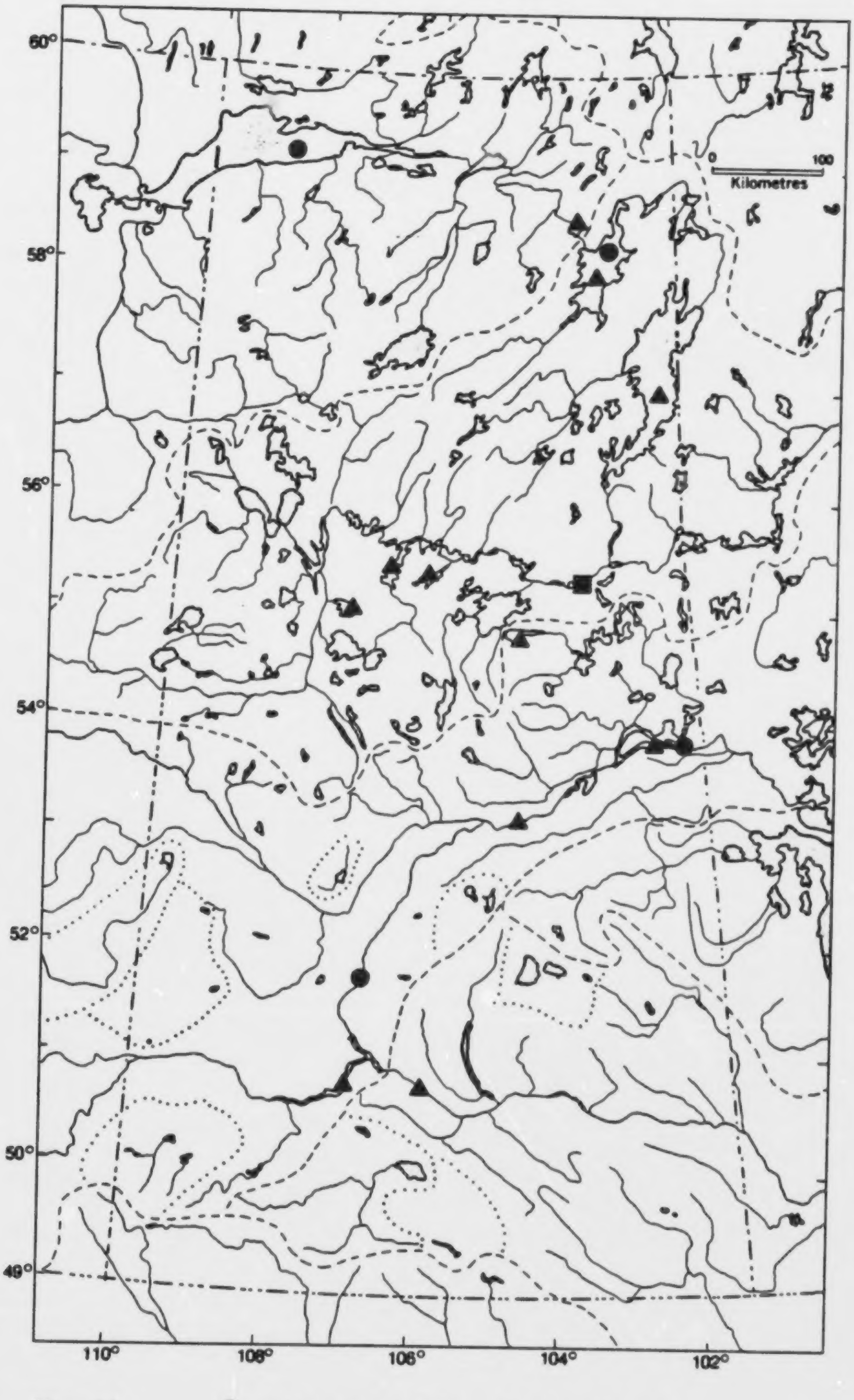

60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 56. Iowa darter, Etheostoma exile

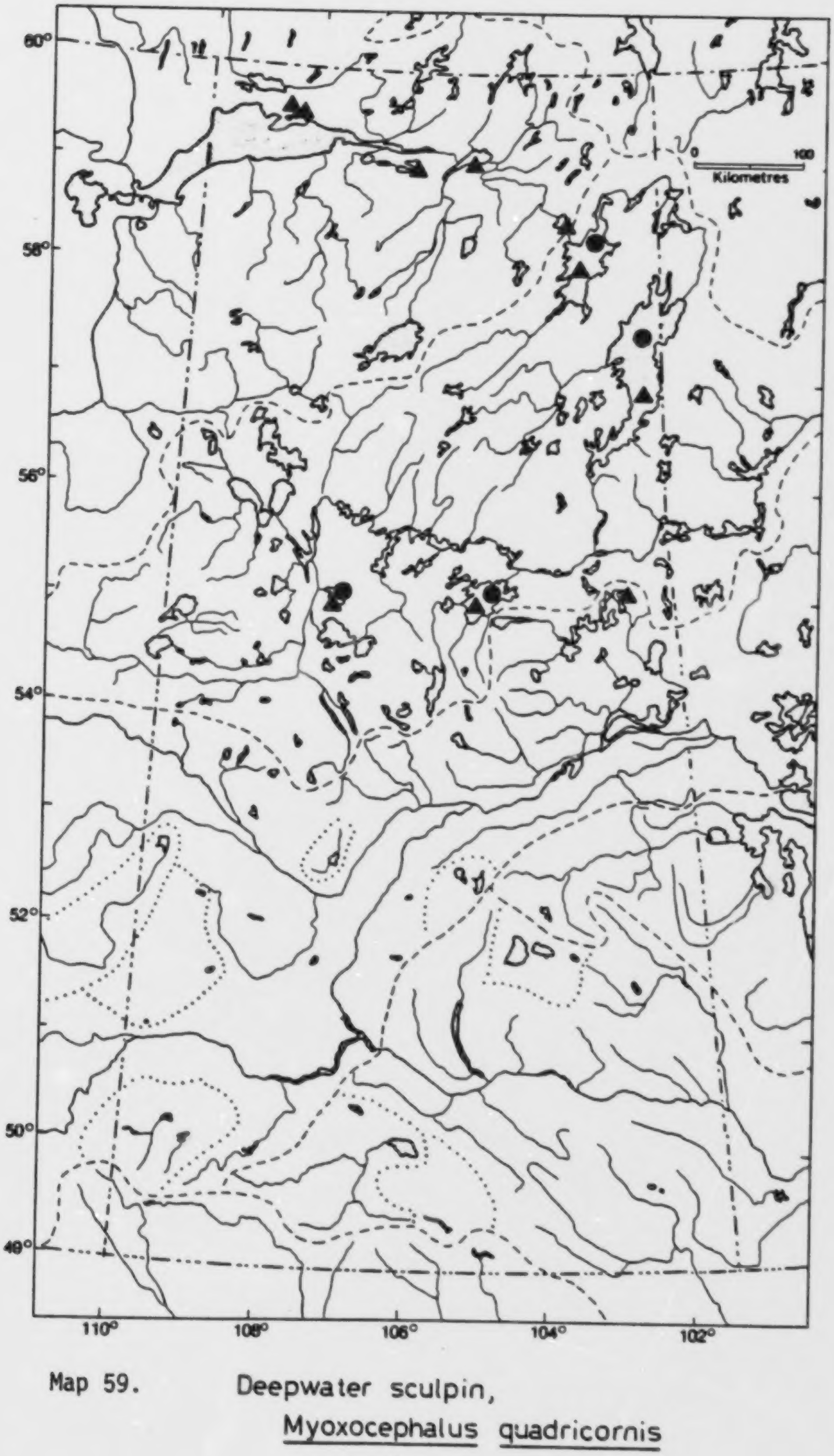


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

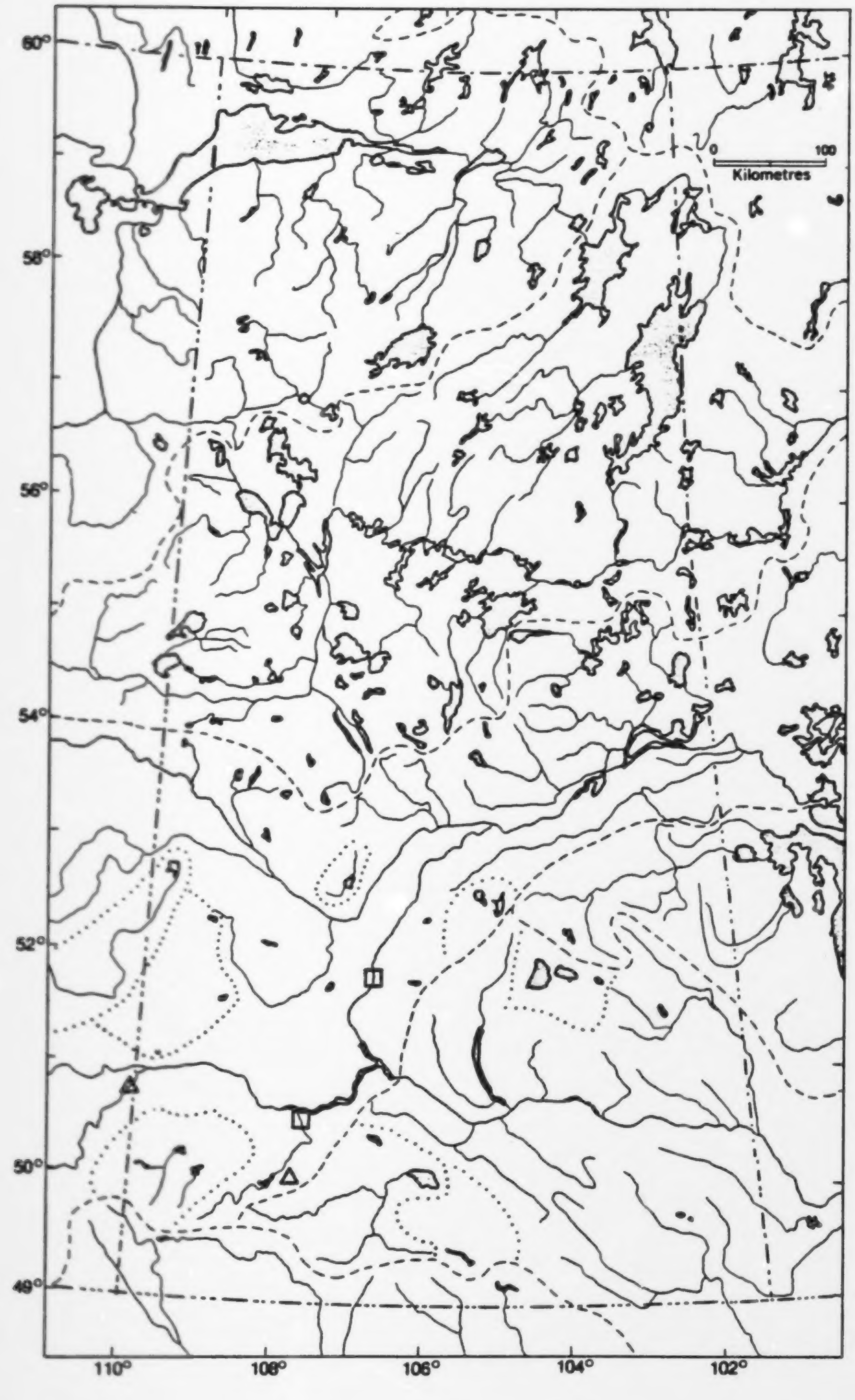
Map 57. Slimy sculpin, Cottus cognatus


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

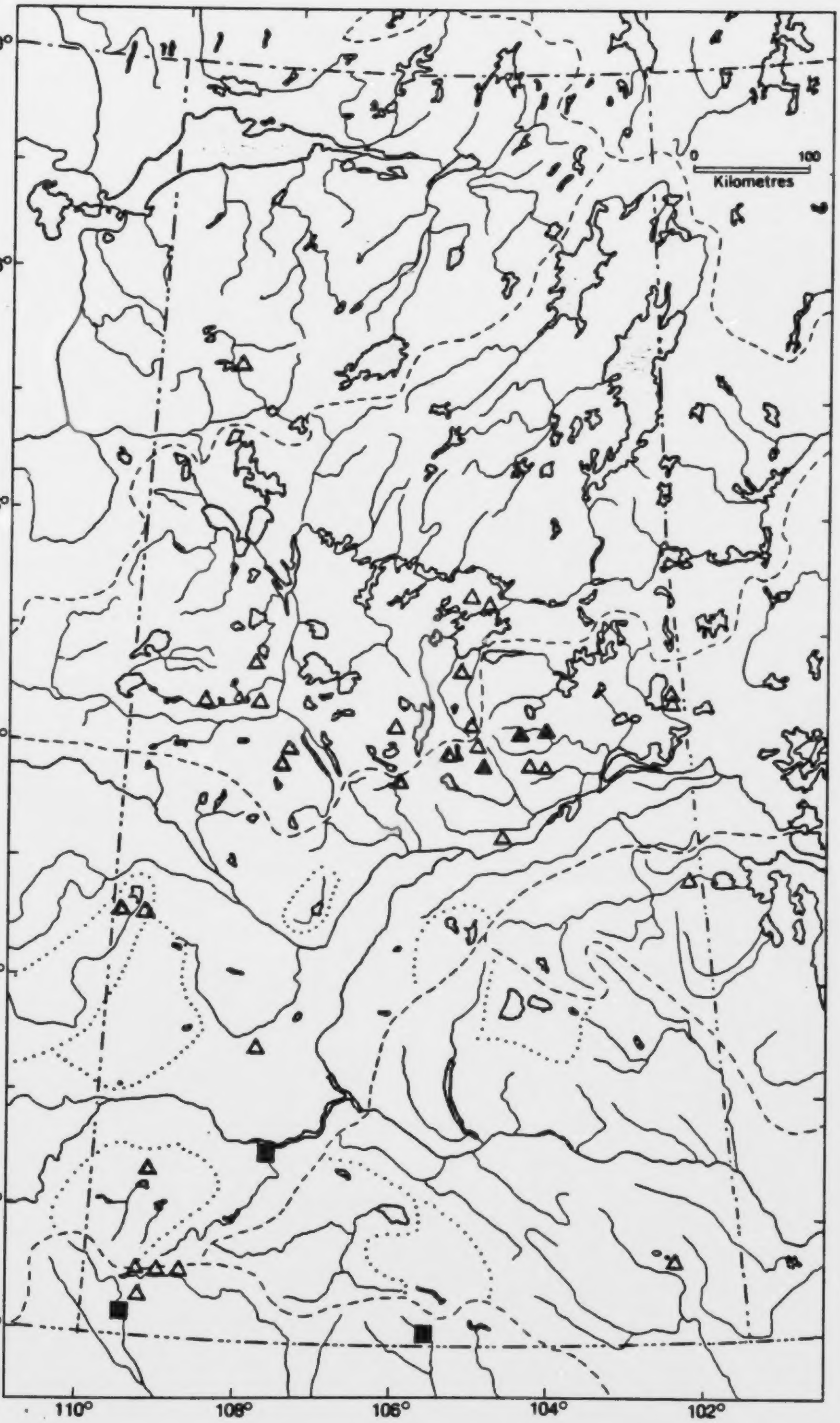
Map 58. Spoonhead sculpin, Cottus ricei


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

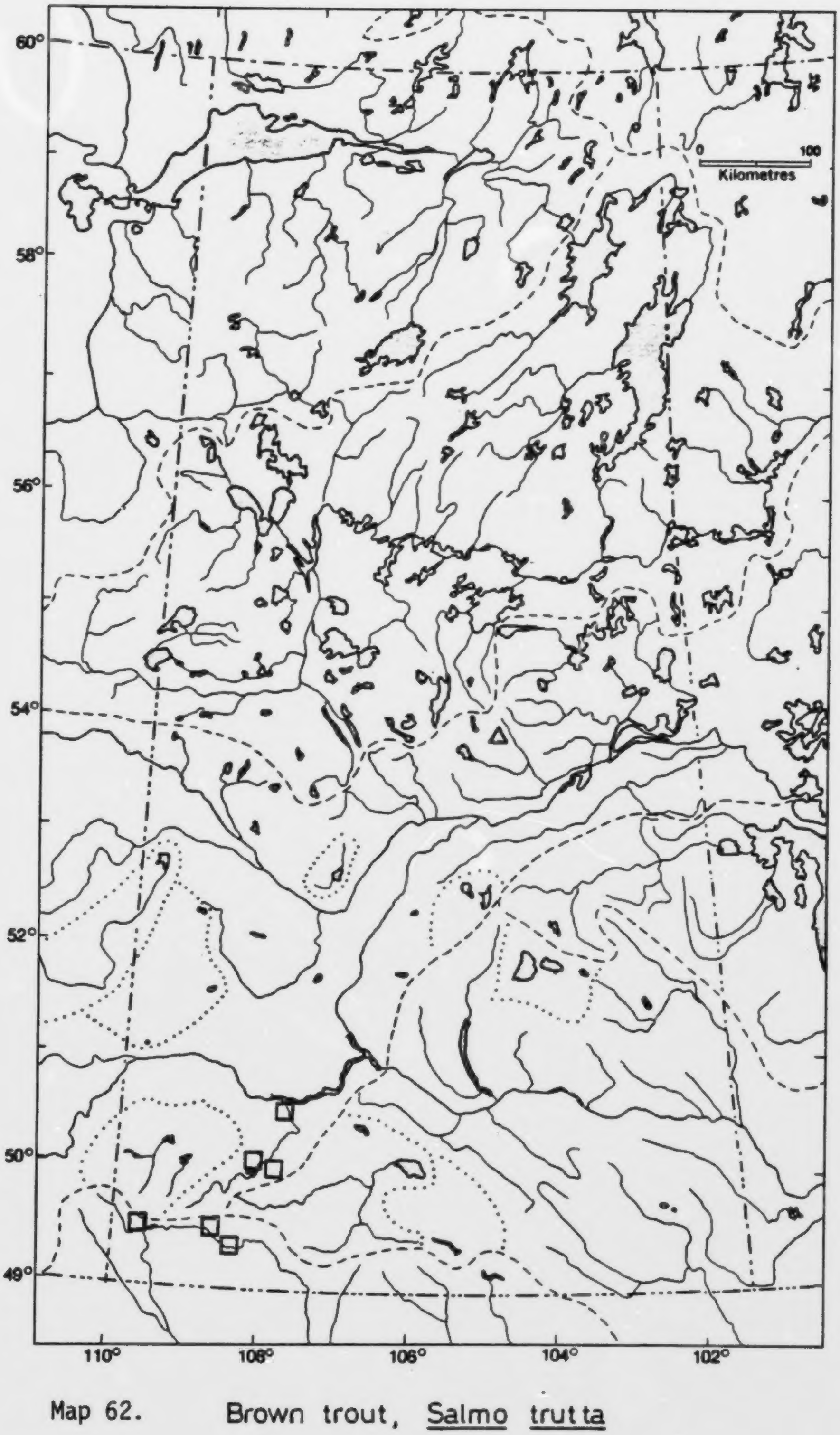
Map 59. Deepwater sculpin, Myoxocephalus quadricornis


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

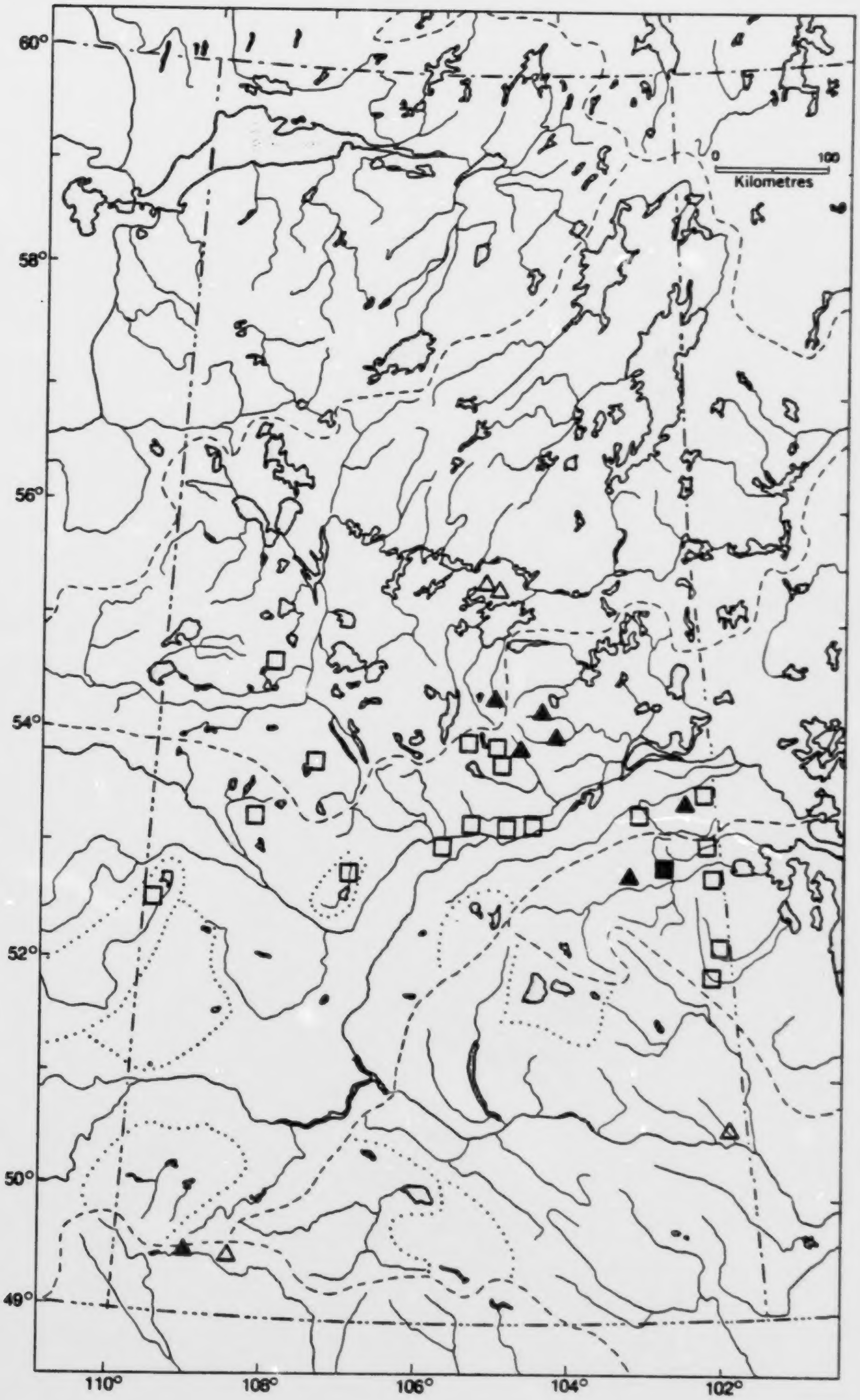
Map 60. American eel, Anguilla rostrata


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

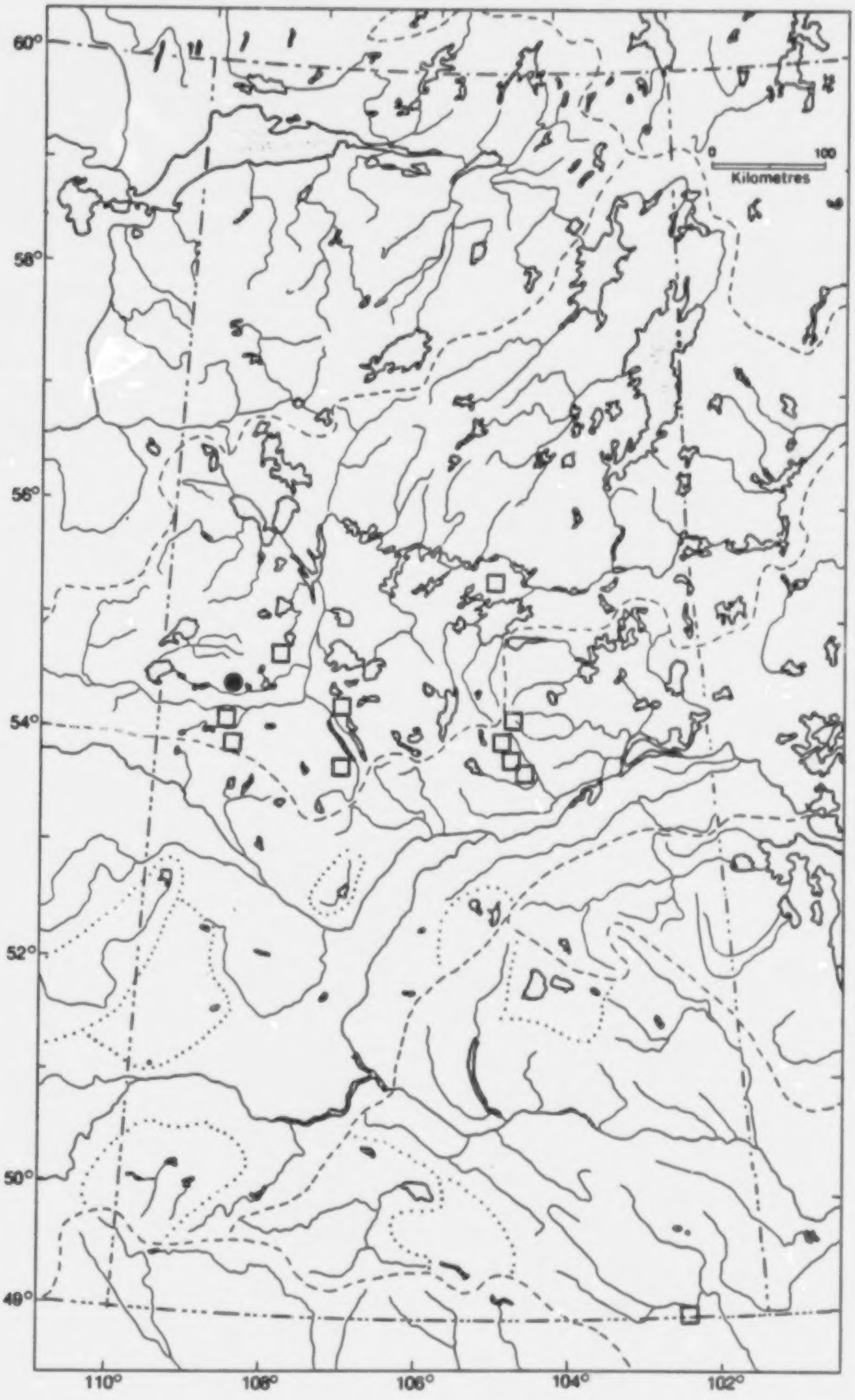
Map 61. Rainbow trout, Salmo gairdneri


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

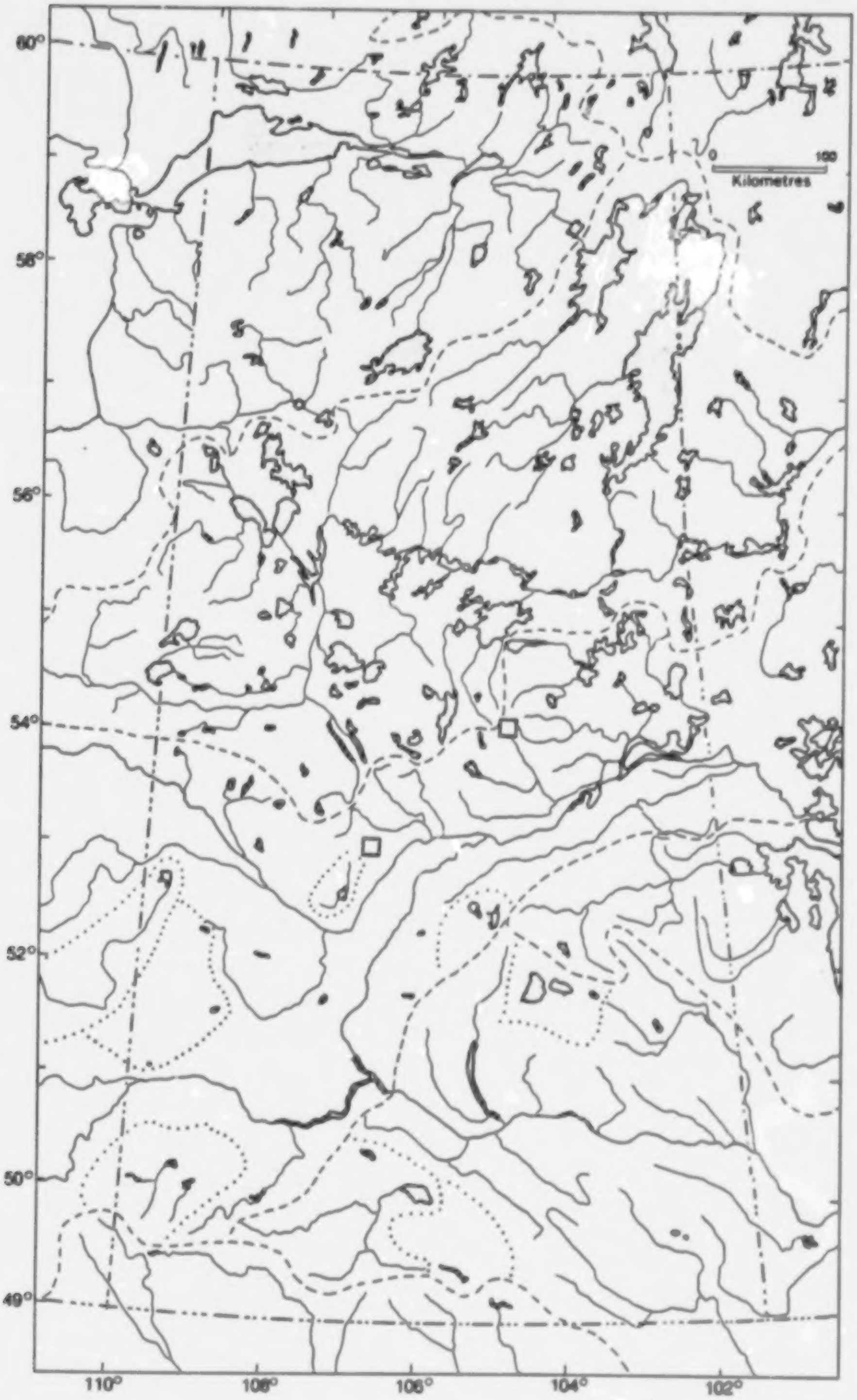
Map 62. Brown trout, Salmo trutta


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

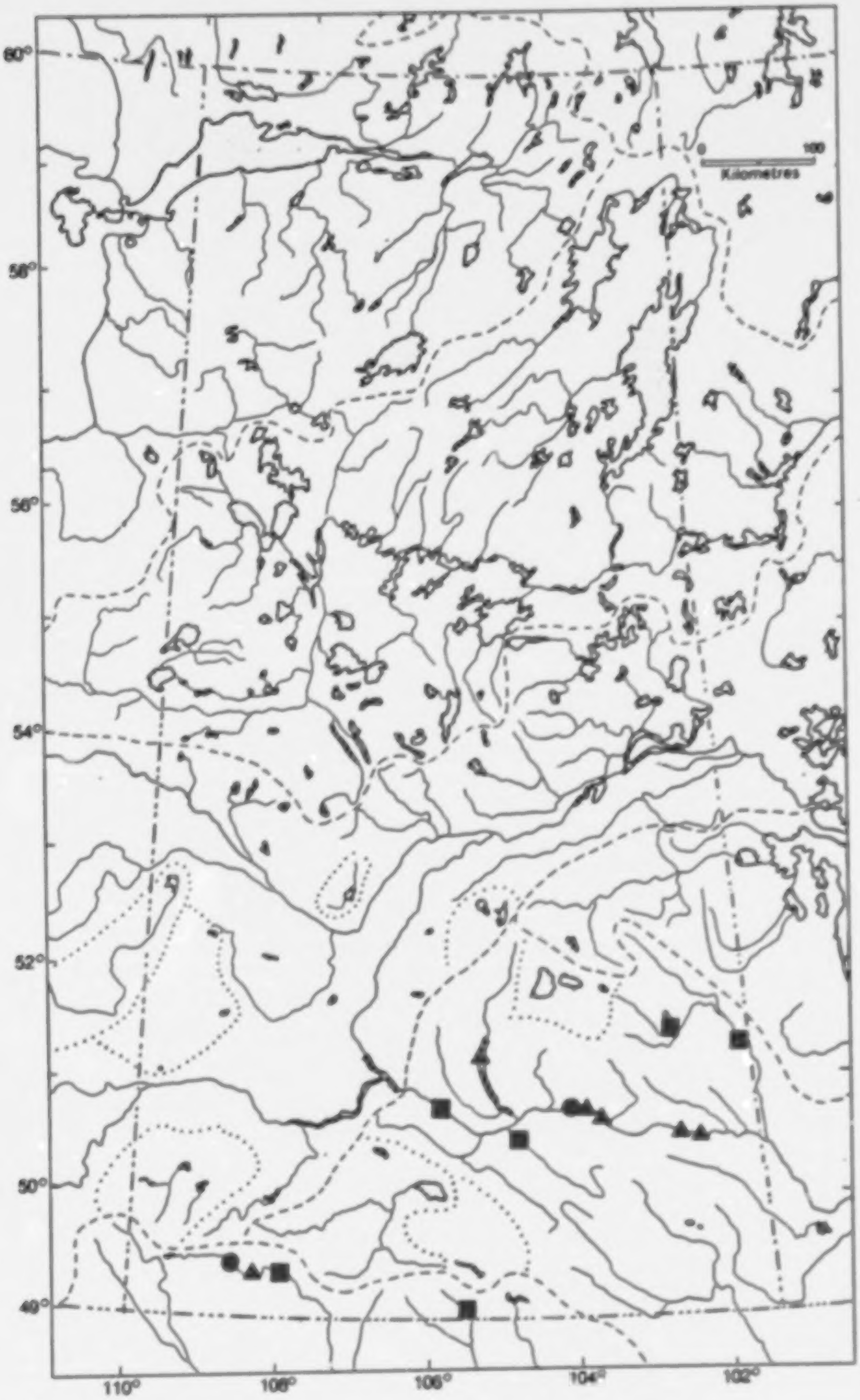
Map 63. Brook trout, Salvelinus fontinalis


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

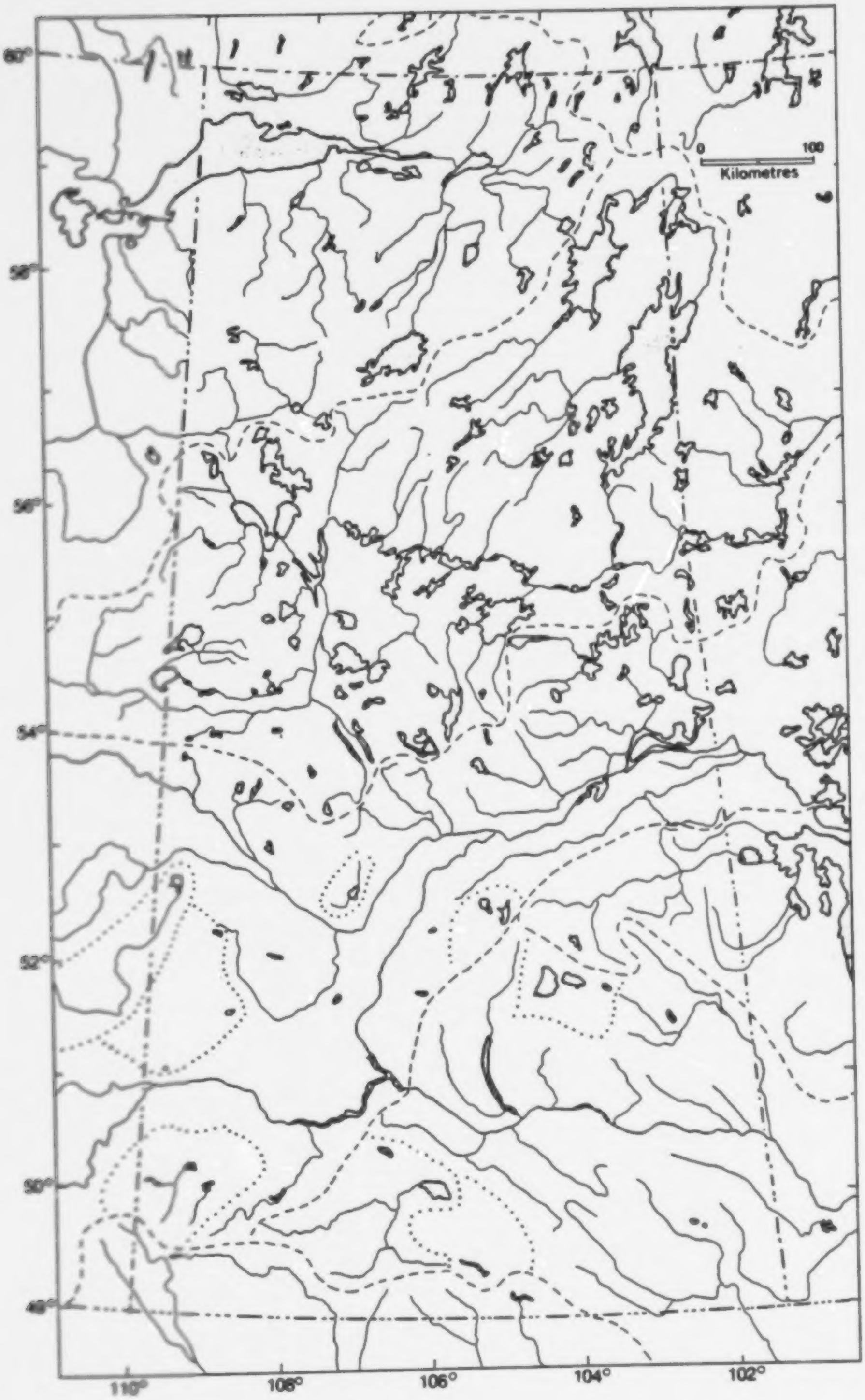
Map 64. Splake


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

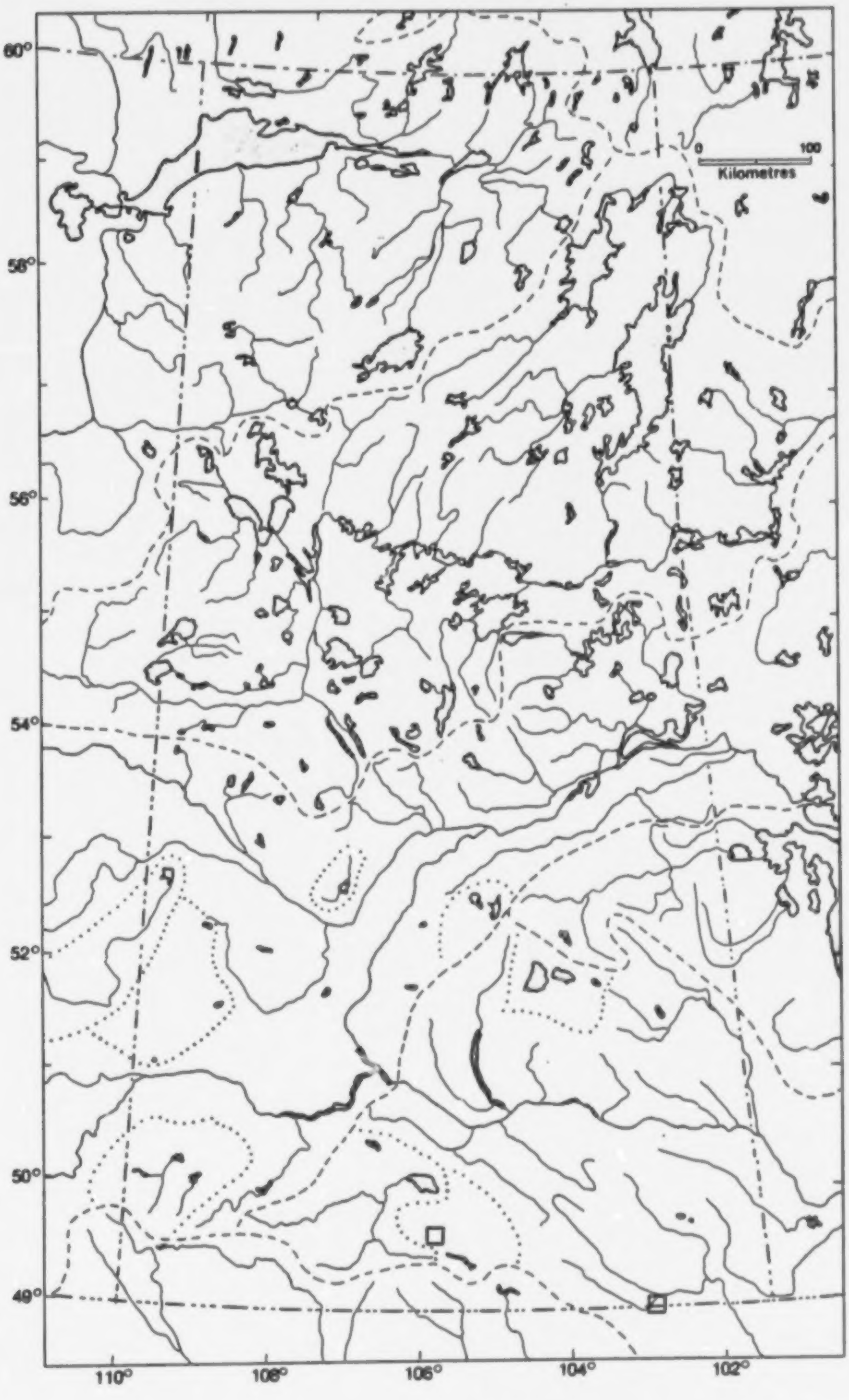
Map 65. Kokanee, Oncorhynchus nerka


60°
58°
56°
54°
52°
50°
49°
0
100
Kilometres
110°
108°
106°
104°
102°

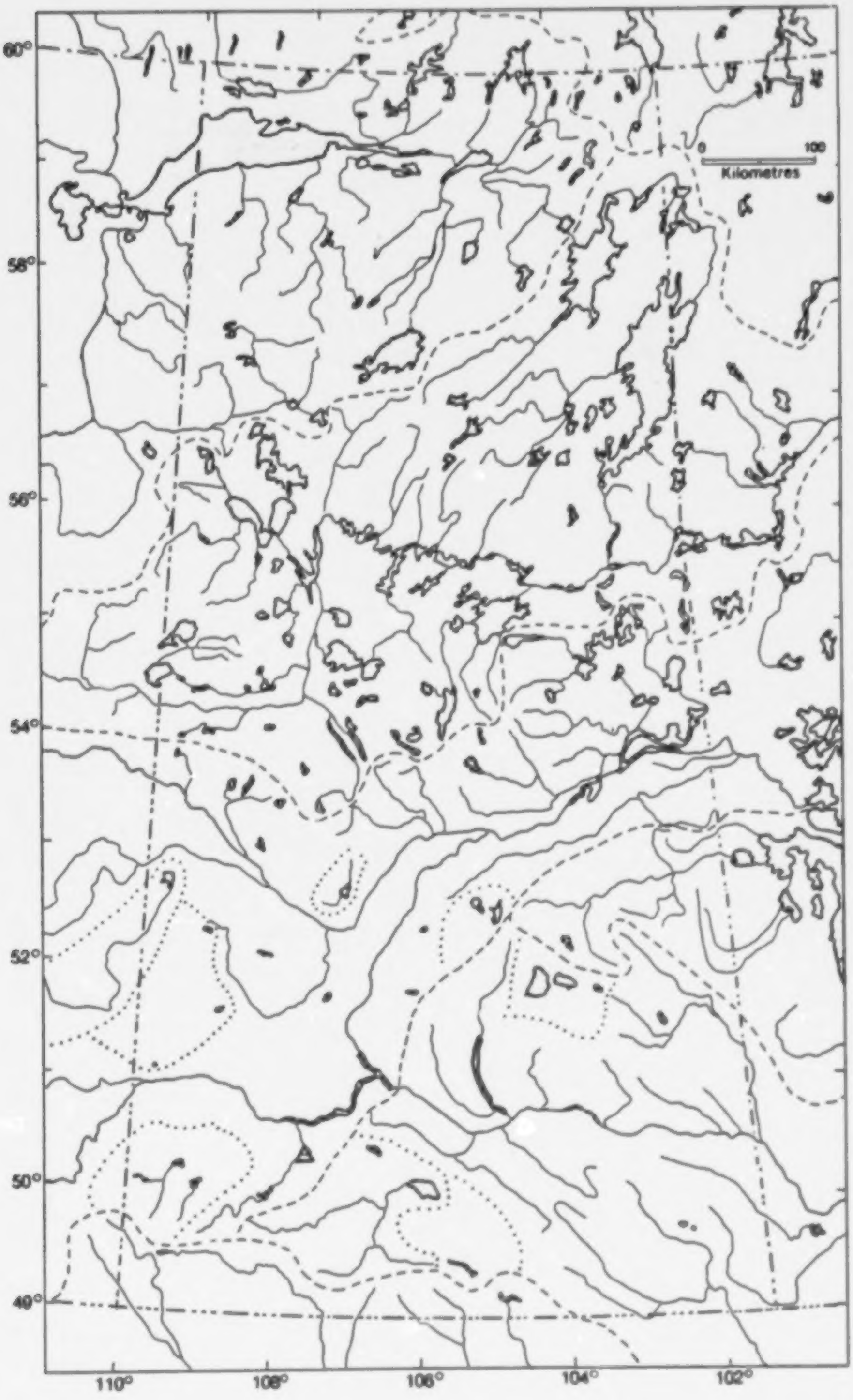
Map 66. Common carp, Cyprinus carpio


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 67. Smallmouth bass, *Micropterus dolomieui*


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 68. Largemouth bass, Micropterus salmoides


60°
58°
56°
54°
52°
50°
49°
110°
108°
106°
104°
102°
0
100
Kilometres

Map 69. Freshwater drum, *Aplodinotus grunniens*

5. REFERENCES

Sask.	Saskatchewan
DNR	Department of Natural Resources
DTRR	Department of Tourism and Renewable Resources
DPRR	Department of Parks and Renewable Resources

Abougendia, Z.M. et al. 1980. Proposed Nipawin hydroelectric project and environmental update. Saskatchewan Research Council. Publication No. C-805-22-E-80.

Anonymous. 1969. Gazetteer of Canada: Saskatchewan. Second Edition. Dept. of Energy, Mines and Resources, Ottawa.

Atton, F.M. 1949. Examination of a small lake northeast of La Ronge townsite. Sask. DNR, Regina. Fish. Tech. Rep. 49-1.

Atton, F.M. 1959. The invasion of Manitoba and Saskatchewan by carp. Trans. Am. Fish. Soc. 88: 203-205.

Atton, F.M. 1971. South shore walleye population, Lake Athabasca. Sask. DNR, Regina. Fish. Tech. Rep. 71-4.

Atton, F.M. and R.P. Johnson, 1955. First records of eight species of fishes in Saskatchewan. Can. Field Naturalist 69(3): 82-84.

Atton, F.M. and R.P. Johnson. 1962. Limnology and fisheries of six lakes of the lower Qu'Appelle Valley. Sask. DNR, Regina. Fish. Tech. Rep. 62-3.

Atton, F.M. and A.R. Murray. 1952. Fisheries investigation of Last Mountain Lake, 1950-51. Sask. DNR, Regina. Fish. Tech. Rep. 52-2.

Atton, F.M. and N.S. Novakowski. 1955. Analysis of sampling the commercial fishery of Lake Athabasca, 1954. Sask. DNR, Regina. Fish. Tech. Rep. 55-3.

Atton, F.M. and N.S. Novakowski. 1956a. Biological survey and fisheries management of Lac des Iles, 1956. Sask. DNR, Regina. Fish. Tech. Rep. 56-3.

Atton, F.M. and N.S. Novakowski. 1956b. Biological survey and fisheries management of Waterhen Lake and adjoining lakes, 1956. Sask. DNR, Regina. Fish. Tech. Rep. 56-4.

Bajkov, A. 1927. Report on Manitou Lake, Saskatchewan. MS.

Barclay, R. 1983. Limnology and fisheries of Beaverlodge, Fredette and Milliken Lakes. Sask. Res. Council. Publication No. C-805-23-E-83.

Barclay, R. and B. Paquin. 1981. Aquatic ecology. In Athabasca sand dunes in Saskatchewan. MacKenzie River Basin Study Report. Supplement 7: 240-275.

Barclay, R. and J. Whiting. 1981. Environmental assessment of proposed water level control strategies for Ena Lake. Sask. Res. Council. Publication No. C-805-31-E-81.

Bidgood, B.F., 1972. Walleyes and water levels in Lake Athabasca. Fish and Wildlife Division, Dept. of Lands and Forests, Edmonton, Alta.

Brown, J.H., U.T. Hammer and G.D. Koshinsky. 1970. Breeding biology of the lake chub, *Couesius plumbeus*, at Lac la Ronge, Saskatchewan. J. Fish. Res. Bd. Canada 27: 1005-1015.

Cheadle, W.B. 1931. Cheadle's journal of trip across Canada, 1862-63. M.G. Hurtig, Ltd., Edmonton (1971).

Chen, M.Y. 1973. Limnology and fisheries of Pinehouse Lake, 1972. Sask. DNR, Regina. Fish. Tech. Rep. 73-2.

Chen, M.Y. 1974. The fisheries ecology of Besnard Lake, 1973. Sask. DTRR, Regina. Fish. Tech. Rep. 74-7.

Chen, M.Y. 1975. Wapawekka Lake fishery survey, 1974. Sask. DTRR, Regina. Fish. Tech. Rep. 75-13.

Dean, E.L. 1975. Aquatic ecology and fisheries in Reindeer Lake. Churchill River Study, Report 10. Sask. DTRR, Regina (Fish. Tech. Rep. 75-3).

Dean, E.L. 1978a. Fontaine Lake. Sask. DTRR, Regina. Fish. Tech. Rep. 78-1.

Dean, E.L. 1978b. Nordbye and Hannah Lakes. Sask. DTRR, Regina, Fish. Tech. Rep. 78-3.

Dean, E.L. 1978c. Riou Lake. Sask. DTRR, Regina. Fish. Tech. Rep. 78-4.

Dean, E.L. 1979a. Upper Foster Lake fishery survey. Sask. DTRR, Regina. Fish. Tech. Rep. 79-1.

Dean, E.L. 1979b. Costigan Lake fishery survey. Sask. DTRR, Regina. Fish. Tech. Rep. 79-7.

Dean, E.L. 1980a. Highrock Lake fishery survey. Sask. DTRR, Regina. Fish. Tech. Rep. 80-2.

Dean, E.L. 1980b. Middle and Lower Foster Lakes fishery survey. Sask. DTRR, Regina. Fish. Tech. Rep. 80-3.

Dean, E.L. 1981. Seven headwater lakes in the Richardson and Clearwater drainage basins; NW Saskatchewan. Sask. DTRR, Regina. Fish. Tech. Rep. 81-2.

Doyle, J.P. 1961a. The effect of carp on Crooked Lake, with studies on their early life history. Sask. DNR, Regina. Fish. Tech. Rep. 61-6.

Doyle, J.P. 1961b. The pollution of the Qu'Appelle River in 1959. Sask. DNR, Regina. Fish. Tech. Rep. 61-7.

Durbin, J.K. and D.A. Fernet. 1979. White sucker, a potential fishery. Sask. DTRR, Regina. Fish. Tech. Rep. 79-3.

Edwards, P.H. 1966a. Fisheries survey and management in ten small lakes along Hanson Lake Road in Nipawin Provincial Park area of Saskatchewan, 1965-66. Sask. DNR, Regina. Fish. Tech. Rep. 66-1.

Edwards, P.H. 1966b. Fishery potential of five streams in the Nipawin Provincial Park area of Saskatchewan, 1959. Sask. DNR, Regina. Fish. Tech. Rep. 66-2.

Eigenmann, C.H. and R.S. Eigenmann. 1892. New fishes from western Canada. American Naturalist 26: 961-964.

Eigenmann, C.H. and R.S. Eigenmann, 1893. Preliminary description of new fishes from the northwest. American Naturalist 27: 151-154.

Fernet, D.A. 1975. Shagwenaw Lake limnology and fishery, 1974. Sask. DTRR, Regina. Fish. Tech. Rep. 75-14.

Gilchrist, F.C. 1888. Sessional Papers of Canada (No. 6), p. 304-307.

Gilchrist, F.C. 1892. Sessional Papers of Canada (No. 11A), p. 163-165.

Harper, F. and J.T. Nichols. 1919. Six new fishes from northwestern Canada. Bull. Amer. Mus. Natur. Hist. 41(2): 263-270.

Hind, H.Y. 1860. Narrative of the Canadian Red River exploring expeditions of 1857 and of the Assiniboine and Saskatchewan exploring expeditions of 1858. M.G. Hurtig, Ltd., Edmonton (1971).

Jensen, R.E. 1980. Chestnut lamprey at Round Lake, 1980. Blue Jay 38(4): 212-213.

Johnson, R.P. 1961. Piprell Lake study, 1960. Sask. DNR, Regina. Fish. Tech. Rep. 61-3.

Johnson, R.P. 1962. Observations on five lakes in the Candle Lake area, 1961. Sask. DNR, Regina. Fish. Tech. Rep. 62-2.

Johnson, R.P. 1963a. Biological survey of Candle Lake, 1961. Sask. DNR, Regina. Fish. Tech. Rep. 63-1.

Johnson, R.P. 1963b. Biological survey of Little Bear Lake, 1960. Sask. DNR, Regina. Fish. Tech. Rep. 63-2.

Johnson, R.P. 1963c. Studies on the life history and ecology of the bigmouth buffalo, _Ictiobus cyprinellus_ (Valenciennes). J. Fish. Res. Board Canada 20(6): 1397-1429.

Johnson, R.P. 1967. Fishery biology for Deschambault-Jan-Pelican Lakes. Sask. DNR, Regina. Fish. Tech. Rep. 67-8.

Johnson, R.P. 1968. Changes in the fishery of Dore Lake between 1956 and 1967. Sask. DNR, Regina. Fish. Tech. Rep. 68-1.

Johnson, R.P. 1969. Puskwakau River creel census, 1968. Sask. DNR, Regina. Fish. Tech. Rep. 69-7.

Johnson, R.P. 1970. A biological survey of Black, Giles and Wapata Lakes in northern Saskatchewan, 1969. Sask. DNR, Regina. Fish. Tech. Rep. 70-3.

Johnson, R.P. 1971a. Limnology and fisheries biology of Black Lake, northern Saskatchewan. Sask. DNR, Regina. Fish. Rep. 9: 46 p.

Johnson, R.P. 1971b. A brief investigation of Hatchet Lake in northern Saskatchewan. Sask. DNR, Regina. Fish. Tech. Rep. 71-1.

Johnson, R.P. 1971c. Investigation of lake trout spawning in Lake Athabasca, 1971. Sask. DNR and Peace-Athabasca Delta Project.

Johnson, R.P. 1972. Analysis of sampling Lake Athabasca commercial fishery, 1969, 1970, 1971. Sask. DNR, Regina. Fish. Tech. Rep. 72-2.

Johnson, R.P. and G.D. Koshinsky. 1961. Biological survey of Buffalo Pound Lake, 1959. Sask. DNR, Regina. Fish. Tech. Rep. 61-4.

Kallemeyn, L.W. 1969. The biology of the Canoe Lake fishery, 1968. Sask. DNR, Regina. Fish. Tech. Rep. 69-2.

Kallemeyn, L.W. 1972a. Limnology and fisheries of Keeley and Utikumak Lakes, 1966-68. Sask. DNR, Regina. Fish. Tech. Rep. 72-1.

Kallemeyn, L.W. 1972b. The limnology and fishery of Lac la Loche, 1969-70. Sask. DNR, Regina. Fish. Tech. Rep. 72-5.

Kallemeyn, L.W. 1973a. The Peter Pond and Churchill Lakes fishery, 1972. Sask. DNR, Regina. Fish. Tech. Rep. 73-3.

Kallemeyn, L.W. 1973b. The limnology and fisheries of Turnor and Wasekamio Lakes, 1970-71. Sask. DNR, Regina. Fish. Tech. Rep. 73-4.

Kendall, W.C. 1924. An annotated list of a collection of fishes made by Francis Harper in the Athabasca Region in 1920, to which is appended a list of species collected by Dr. R.T. Morris in the district between Lake Winnipeg and Hudson Bay in 1905. Contributions to Canadian Biology 1(23): 421-439.

Kirch, E. 1960. Biological survey of Madge Lake, 1959. Sask. DNR, Regina. Fish. Tech. Rep. 60-1.

Kooyman, A.H. 1970. Taxonomy of the cisco in Waskesiu Lake, Prince Albert National Park, Saskatchewan. Canadian Wildlife Service Manuscript Report.

Koshinsky, G.D. 1964a. Biological survey of Nemeiben Lake in north central Saskatchewan, 1960-63. Sask. DNR, Regina. Fish. Tech. Rep. 64-1.

Koshinsky, G.D. 1964b. Limnology and fisheries of five Precambrian Headwater Lakes of the MacKay drainage in N. central Saskatchewan, 1960-64. Sask. DNR, Regina. Fish. Tech. Rep. 64-3.

Koshinsky, G.D. 1968. Limnology and fisheries of 28 small shield lakes near Lac la Ronge. Sask. DNR, Regina. Fish. Tech. Rep. 68-2; 68-3; 68-4; 68-5.

Koshinsky, G.D. 1971. Trout and McIntosh Lakes - The comparative limnology and fisheries of a Churchill River lake and an adjacent Shield lake in central Saskatchewan. Sask. DNR, Regina. Fish. Tech. Rep. 71-2.

Koshinsky, G.D. 1979. Northern pike in Lac la Ronge. Sask. DTRR, Regina. Fish. Tech. Rep. 79-8.

Lane, C.B. 1967a. The limnology, fisheries and management of 17 lakes along the Hanson Lake Road, 1964-66. Sask. DNR, Regina. Fish. Tech. Rep. 67-3.

Lane, C.B. 1967b. Limnology and management of Lac des Iles, 1966. Sask. DNR, Regina. Fish. Tech. Rep. 67-7.

Lane, C.B. 1969. Survey of the limnology of Kimball Lake in Meadow Lake Provincial Park, 1966. Sask. DNR, Regina. Fish. Tech. Rep. 69-1.

Larson, D.J. 1975. Stream habitat and forest harvesting in the commercial forest zone--an interim report. Sask. DTRR, Regina. Fish. Tech. Rep. 75-12.

Larson, D.J. 1976. Stream habitat and forest harvesting. Sask. DTRR, Regina. Fish. Tech. Rep. 76-3.

Liaw, W.K. 1975. Tie Lake fishery resources and trophic conditions. Sask. DTRR, Regina. Fish. Tech. Rep. 75-15.

Liaw, W.K. 1976a. Wathaman and Davin Lakes comparative fisheries and limnology. Sask. DTRR, Regina. Fish. Tech. Rep. 76-1.

Liaw, W.K. 1976b. Delaronde Lake limnology and fishery. Sask. DTRR, Regina. Fish. Tech. Rep. 76-9.

Liaw, W.K. 1976c. Hackett Lake management report, 1975. Sask. DTRR, Regina. Fish. Tech. Rep. 76-2.

Liaw, W.K. 1978a. Cowan Lake--assessment of the habitat and fishery resource. Sask. DTRR, Regina. Fish. Tech. Rep. 78-2.

Liaw, W.K. 1978b. Jackfish and Murray Lakes environmental changes and whitefish populations. Sask. DTRR, Regina. Fish. Tech. Rep. 78-5.

Liaw, W.K. and J.F. O'Connor. 1975. Impact on five Churchill River lakes. Sask. DTRR, Regina. Fish. Tech. Rep. 75-1

Low, C.J. and D.A. Fernet, 1974a. Biology and fishery of Elaine Lake, 1973. Sask. DNR, Regina. Fish. Tech. Rep. 74-3.

Low, C.J. and D.A. Fernet, 1974b. Limnology and fisheries of Weyakwin Lake, 1973. Sask. DNR, Regina. Fish. Tech. Rep. 74-4.

Low, C.J. and D.A. Fernet, 1974c. Small lakes on Smoothstone Lake Road, 1973. Sask. DNR, Regina. Fish. Tech. Rep. 74-5.

Lowe, D.R. 1972. The limnology and biology of Sahli Lake, 1971-72. Sask. DNR, Regina. Fish. Tech. Rep. 72-13.

Marshall, T.L. 1970. Limnology, biology and fisheries management of East Trout and Nipekamew Lakes, 1967. Sask. DNR, Regina. Fish. Tech. Rep. 70-1.

Marshall, T.L. and R.P. Johnson. 1971. History and results of fish introductions in Saskatchewan, 1900-1969. Sask. Dep. Natur. Resources, Fish. Rep. 8: 30 p.

Mendis, A.S. 1956. A limnological comparison of four lakes in central Saskatchewan. Sask. Dep. Natur. Resources. Fish. Rep. 2: 23 p.

Naftel, P.C. 1965. Fish population changes associated with water level reduction in Jackfish and Murray Lakes, 1955 and 1964. Sask. DNR, Regina. Fish. Tech. Rep. 65-2.

Nelson, J.S. and F.M. Atton. 1971. Geographic and morphological variation in the presence and absence of the pelvic skeleton in the brook stickleback, Culaea inconstans (Kirtland), in Alberta and Saskatchewan. Canadian J. of Zool. 49(3): 343-352.

Novakowski, N.S. 1955. Biological and fisheries survey of Reindeer Lake, 1954. Sask. DNR, Regina. Fish. Tech. Rep. 55-1.

Olund, L.J. and F.B. Cross. 1961. Geographic variation in the North American cyprinid fish, Hybopis gracilis. University of Kansas Publications 13(7): 323-348.

Preble, E.A. 1908. A biological investigation of the Athabaska-Mackenzie Region. In North American Fauna, No. 27. U.S. Dept. of Agriculture, Washington, pp. 502-515.

Prince, E.E., A. Halkett, W.S. Odell, and E.E. Lemieux. 1908. Report of the zoological branch, 1907. The Ottawa Naturalist. p. 198-201.

Radford, D.S. 1972. The first record of Anguilla rostrata from Alberta. Journal Fisheries Research Board of Canada 29(7): 1084.

Rawson, D.S. 1928. The game fish of Prince Albert National Park. Presented to the Biological Board of Canada. MS.

Rawson, D.S. 1942. Investigation of Sask. lakes. A report on the field investigations carried out in the summer of 1942 under a grant from the National Research Council. MS.

Rawson, D.S. 1945. The experimental introduction of smallmouth black bass into lakes in the Prince Albert National Park, Saskatchewan. Trans. Amer. Fish. Soc. 73: 19-31.

Rawson, D.S. 1947. Lake Athabasca. Fish. Res. Bd. of Canada. Bulletin 72: 69-85.

Rawson, D.S. 1949. A checklist of the fishes of Saskatchewan. Royal Commission on the Fisheries of Saskatchewan, 1947. Regina. 8 p.

Rawson, D.S. 1950. The grayling (Thymallus signifer) in northern Saskatchewan. Canadian Fish Culturist, No. 6, pp. 1-8.

Rawson, D.S. 1952. Fisheries investigation of Amisk Lake, 1950-51. Sask. DNR, Regina. Fish. Tech. Rep. 52-1.

Rawson, D.S. 1956. Limnology and fisheries in the Upper Churchill Drainage, 1956. Sask. DNR, Regina. Fish. Tech. Rep. 56-1.

Rawson, D.S. 1957. Limnology and fisheries of five lakes in the upper Churchill drainage, Saskatchewan. Sask. DNR, Regina. Fish. Rep. 3: 61 p.

Rawson, D.S. 1958a. Limnology and fisheries of Cree Lake, 1958. Sask. DNR, Regina. Fish. Tech. Rep. 58-1.

Rawson, D.S. 1958b. Limnology and fisheries of Wollaston Lake, 1958. Sask. DNR, Regina. Fish. Tech. Rep. 58-2.

Rawson, D.S. 1959a. Five lakes on the Churchill River near Stanley, Saskatchewan, 1959. Sask. DNR, Regina. Fish. Tech. Rep. 59-6.

Rawson, D.S. 1959b. Limnology and fisheries of Cree and Wollaston Lakes in northern Saskatchewan. Sask. DNR, Regina. Fish. Rep. 4: 73 p.

Rawson, D.S. 1960. Five lakes on the Churchill River near Stanley, Saskatchewan. Sask. DNR, Regina. Fish. Rep. 5: 38 p.

Rawson, D.S. and F.M. Atton. 1951. Fisheries investigation of Lac la Ronge, Saskatchewan, 1951. Sask. DNR, Regina. Fish. Tech. Rep. 51-1.

Rawson, D.S. and F.M. Atton. 1953. Biological investigation and fisheries management at Lac la Ronge, Saskatchewan. Sask. DNR, Regina. Fish. Rep. 1: 39 p.

Rawson, D.S. and J.E. Moore. 1944. The saline lakes of Saskatchewan. Can. J. of Research D,22: 141-201.

Reed, E.B. 1957. Preliminary report of the North and South Saskatchewan Rivers, 1957. Sask. DNR, Regina. Fish. Tech. Rep. 57-1.

Reed, E.B. 1959a. Biological survey of the principal rivers of the Saskatchewan River system in the Province of Saskatchewan, 1957-58. Sask. DNR, Regina. Fish. Tech. Rep. 59-1.

Reed, E.B. 1959b. Limnology and fisheries of Cumberland and Namew Lakes. Sask. DNR, Regina. Fish. Tech. Rep. 59-2.

Reed, E.B. 1962. Limnology and fisheries of the Saskatchewan River in Saskatchewan. Sask. DNR, Regina. Fish. Rep. 6: 48 p.

Richardson, J.R. 1836. Fauna Boreali-Americana. Pt. 3, The fish. Arno Press, New York. 1978. 327 p.

Robins, C.R. et al. 1980. A list of common and scientific names of fishes from the United States and Canada. American Fisheries Society. Special Publication No. 12: 174 p.

Royer, L.M. 1961a. Biological survey of Thomson Lake, 1960. Sask. DNR, Regina. Fish. Tech. Rep. 61-1.

Royer, L.M. 1961b. Biological survey of Fishing Lake, 1960 (Wadena). Sask. DNR, Regina. Fish. Tech. Rep. 61-5.

Royer, L.M. 1962a. Investigation of lakes in Moose Mountain Provincial Park, 1960. Sask. DNR, Regina. Fish. Tech. Rep. 62-1.

Royer, L.M. 1962b. Biological survey and fisheries management of Greenwater and Marean Lakes, 1961. Sask. DNR, Regina. Fish. Tech. Rep. 62-4.

Royer, L.M. 1964. Biological survey of the Fishing Lakes in Nipawin Provincial Park, 1963. Sask. DNR, Regina. Fish. Tech. Rep. 64-2.

Royer, L.M. 1966. The limnology and fisheries resources of the Saskatchewan River Delta, 1964-66. Sask. DNR, Regina. Fish. Tech. Rep. 66-3.

Royer, L.M. 1969. Limnological and fisheries survey of Tobin Lake, 1966-67. Sask. DNR, Regina. Fish. Tech. Rep. 69-3.

Royer, L.M. 1972 . Ecological baseline survey of the Beaver River, 1971. Sask. DNR, Regina. Fish. Tech. Rep. 72-7.

Royer, L.M. and C.B. Anderson. 1977. First record of the stonecat in Saskatchewan waters. Blue Jay 35(2): 73.

Ruggles, C.P. 1959a. Biological and fisheries survey of Dore Lake, 1956. Sask. DNR, Regina. Fish. Tech. Rep. 59-3.

Ruggles, C.P. 1959b. Biological and fisheries survey of Lac la Plonge and Canoe Lakes, 1958. Sask. DNR, Regina. Fish. Tech. Rep. 59-4.

Ruttan, R.A. 1951. Fish cultural possibilities of prairie reservoirs. Sask. DNR, Regina. Fish. Tech. Rep. 51-3.

Sawchyn, W.W. 1967a. Biology of the Turtle Lake fishery. Sask. DNR, Regina. Fish. Tech. Rep. 67-1.

Sawchyn, W.W. 1967b. Hanson and Wildnest Lakes, 1966. Sask. DNR, Regina. Fish. Tech. Rep. 67-4.

Sawchyn, W.W. 1967c. Granite Lake, 1966. Sask. DNR, Regina. Fish. Tech. Rep. 67-5.

Sawchyn, W.W. 1973. Environmental survey of Wollaston Lake, Sask; Saskatchewan Research Council. Publication No. C73-5.

Sawchyn, W.W. 1975a. Impact on the Reindeer River and four Churchill River lakes. Sask. DTRR, Regina. Fish. Tech. Rep. 75-2.

Sawchyn, W.W. 1975b. Environmental baseline survey of the Cluff and Carswell Lake areas. Saskatchewan Res. Council. Publication No. C75-1.

Sawchyn, W.W., E.W. Kardash and D.R. Cullimore. 1977. A limnological survey of Boundary Reservoir. Saskatchewan Res. Council. Publication No. C77-2.

Sawchyn, W.W. 1978. Key Lake Project. Appendix VI. Aquatic ecology of the Key Lake area. pp. 1-293.

Sawchyn, W.W. 1980 in Abougendia, Z.M. et al. Environmental study of the Saskatchewan River, Saskatchewan, in the vicinity of Choiceland and the "Forks". Saskatchewan Res. Council. Publication No. C-805-25-E-80.

Sawchyn, W.W. 1982. The impact of methoxychlor as a blackfly larvicide in the Saskatchewan River. Saskatchewan Res. Council. Publication No. C-805-19-E-82.

Sawchyn, W.W. and E.W. Kardash. 1976. Brabant, Wierzycki, Dickens, Davis, McLennan. Sask. DTRR, Regina. Fish. Tech. Rep. 76-7.

Saylor, M.L. 1972. Lac Ile-a-la-Crosse ecological baseline survey. Sask. DNR, Regina. Fish. Tech. Rep. 76-2.

Schmidt, A.E. 1970. Limnology and fisheries of the Wood-Manawan Lakes area in east-central Saskatchewan, 1970. Sask. DNR, Regina. Fish. Tech. Rep. 70-5.

Schmidt, A.P., D.A. Meyer, and W.W. Sawchyn, 1978. Environmental overview for the proposed hydro-electric development on the Rapid River. Saskatchewan Res. Council. Publication No. C78-17.

Scott, W.B. and E.J. Crossman. 1973. Freshwater fishes of Canada. Fisheries Research Board of Canada. Bull. 184: 966 pp.

Smith, J. 1978. Finescale dace in Saskatchewan. Blue Jay 36(2): 86-87.

Smith, N.W. 1974a. Diefenbaker Lake, 1973. Sask. DNR, Regina. Fish. Tech. Rep. 74-1.

Smith, N.W. 1974b. Moose Mountain fish management proposal, 1974. Sask. DTRR, Regina. Fish. Tech. Rep. 74-2.

Smith, N.W. 1974c. Observations on stocked species, Lake Diefenbaker, 1974. Sask. DTRR, Regina. Fish. Tech. Rep. 74-8.

Smith, N.W. 1976. Last Mountain Lake limnology and fishery, 1974. Sask. DTRR, Regina. Fish. Tech. Rep. 76-8.

Smythe, T. 1968. Agenda paper. Historic Sites and Monuments Board of Canada. St. John's, Newfoundland.

Sprules, W.M. and K.H. Doan. 1947. Records of the mooneye (*Hiodon tergisus*) and the quillback sucker (*Carpiodes cyprinus*) from Saskatchewan. Copeia. No. 3, pp. 196-197.

Stone, O.T. 1889. Sessional Papers of Canada (No. 8). p. 231.

Swanson, S. 1982. Levels and effects of radionuclides in fish and insect fauna from the Beaverlodge area, Saskatchewan. Saskatchewan Res. Council. Publication No. C-806-1-E-82.

Tones, P.I. (ed.) 1979. Supplementary environmental impact statement for the Amok Ltd. Uranium Project, Cluff Lake. Saskatchewan Res. Council. Publication No. C79-14.

Tones, P.I. 1982. Limnological and fisheries investigation of the flooded open pit at the Gunnar uranium mine. Saskatchewan Res. Council. Publication No. C-805-10-E-82.

Willard, J.R., W.W. Sawchyn and J.A. Light, 1977. Environmental overview for the Charlot River hydroelectric development. Saskatchewan Res. Council. Sask. Publication No. C77-1.

Willock, T.A. 1969. Distributional list of fishes in the Missouri drainage of Canada. J. Fish. Res. Bd. Canada 26: 1439-1449.

ADDENDA:

Atton, F.M. 1969. Fish, amphibians and reptiles. p. 83-84. In Atlas of Saskatchewan, Edited by J.H. Richards and K.I. Fung, University of Saskatchewan. 236 p.

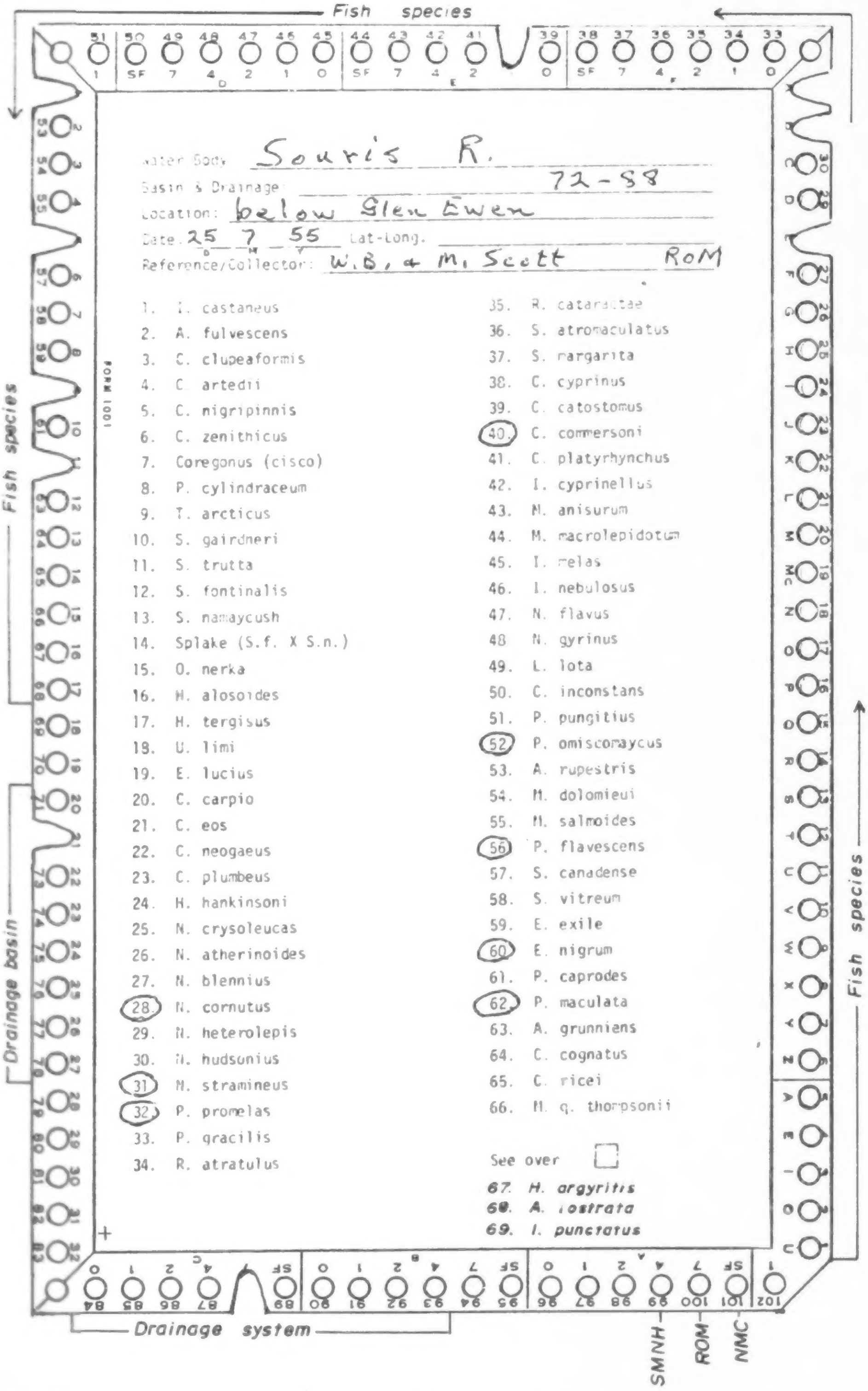
Stegner, W. 1955. Wolf willow Viking Press, Inc., New York, N.Y. 306 p.

Appendix 1. Coding of species and drainage systems on punch cards for manipulation of fish distribution data.

Species and location records were compiled on punch cards (EZE-SORT) to facilitate sorting the data by species and water body. This very simple method of handling data allows sorting in as many refinement steps as desired; it is only necessary to design a coding system for the array of data classes in each step. The card contains 102 numbered holes. This is the limit on the items of information that can be handled on one card, but is not an absolute limit on the capacity of a system of cards.

The species of fish in Saskatchewan were assigned code numbers 1-68 as shown on the face of the card. These code numbers, corresponding to holes on the card, are thus reserved and cannot be used for any other information (Appendix, Fig. 1).

To handle geographic information, the drainage basins of the province were assigned code numbers 71-78; these numbers are also dedicated to this use. Each drainage basin is further subdivided into drainage systems, as shown on the map, Fig. 1. Within a drainage basin the systems were given code numbers between 84 and 93, as required, for as many systems as were desired in a basin (see Table 1). This arrangement, somewhat analogous to looping in computer programs, enables in this case 18 holes on the card to accommodate 53 information classes (Appendix, Fig. 1). Since code numbers 84-93 may be used for different drainage systems, dependent on the associated basin, they are not reserved to single classes of information.


Fish species
Fish species
Fish species
Drainage basin
Drainage system
SMNH
ROM
NMC
FORM 1001
SF
D
E
F
B
C

Water Body: Souris R.
Basin & Drainage: 72-58
Location: below Glen Ewen
Date. 25 7 55 Lat-Long.
Reference/Collector: W.B. & M. Scott RoM

1. I. castaneus
2. A. fulvescens
3. C. clupeaformis
4. C. artedii
5. C. nigripinnis
6. C. zenithicus
7. Coregonus (cisco)
8. P. cylindraceum
9. T. arcticus
10. S. gairdneri
11. S. trutta
12. S. fontinalis
13. S. namaycush
14. Splake (S.f. X S.n.)
15. O. nerka
16. H. alosoides
17. H. tergisus
18. U. limi
19. E. lucius
20. C. carpio
21. C. eos
22. C. neogaeus
23. C. plumbeus
24. H. hankinsoni
25. N. crysoleucas
26. N. atherinoides
27. N. blennius
[✓ 28.] N. cornutus
29. N. heterolepis
30. N. hudsonius
[✓ 31.] N. stramineus
[✓ 32.] P. promelas
33. P. gracilis
34. R. atratulus
35. R. cataractae
36. S. atromaculatus
37. S. margarita
38. C. cyprinus
39. C. catostomus
[✓ 40.] C. commersoni
41. C. platyrhynchus
42. I. cyprinellus
43. M. anisurum
44. M. macrolepidotum
45. I. melas
46. I. nebulosus
47. N. flavus
48 N. gyrinus
49. L. lota
50. C. inconstans
51. P. pungitius
[✓ 52.] P. omiscomaycus
53. A. rupestris
54. M. dolomieui
55. M. salmoides
[✓ 56.] P. flavescens
57. S. canadense
58. S. vitreum
59. E. exile
[✓ 60.] E. nigrum
61. P. caprodes
[✓ 62.] P. maculata
63. A. grunniens
64. C. cognatus
65. C. ricei
66. M. q. thompsonii

See over ☐

67. H. argyritis
68. A. rostrata
69. I. punctatus

Appendix Fig. I Coding of species and drainage systems on punch cards.

The location code for the water body is entered on each card as the appropriate pair of numbers, e.g. 72-88 on Appendix, Fig. 1 (upper left-hand corner). In sorting the cards for location, it is advantageous to select the basin code (72) first, then the system code (88).

The three major museums where specimens of Saskatchewan fish are held have been given reserved code numbers.

99	Saskatchewan Museum of Natural History
100	Royal Ontario Museum of Zoology
101	National Museums of Canada

This was a convenience in preparing the species record, but may not have much further practical use.

The cards are manipulated by inserting a needle in the selected hole in a deck (handful) of cards; those cards punched at that hole will separate from the remaining deck. It is convenient to select either the species or drainage basin first, then the other of these two codes, and finally the drainage system. The procedure depends on whether the primary interest is the drainage basin records or the distribution of the species in the province.